The Lettsomian Lectures
ON
DISEASES AND DISORDERS OF THE HEART AND ARTERIES IN MIDDLE AND ADVANCED LIFE.

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BY J. MITCHELL BRUCE, M.A., LL.D. ABERD., M.D., F.R.C.P. LOND.,

PHYSICIAN TO CHARING-CROSS HOSPITAL; CONSULTING PHYSICIAN TO BROMPTON HOSPITAL FOR CONSUMPTION, &c.

LECTURE III.[1]

Delivered on April 1st.

MR. VICE-PRESIDENT AND GENTLEMEN,—In this the concluding lecture of the series I will attempt to deal with the applications of the facts and considerations which I submitted to you on the two previous occasions when I had the honour to address you. I trust that what I submitted to you then proved to be of some interest. Let us see now whether it is practically useful. However much the etiology and pathology of the diseases and disorders of the heart and arteries in middle and advanced life may deserve study as matters of natural history, we should be disappointed if they could not be turned to account in prognosis and treatment. These are the subjects which I propose to discuss this evening.

Now, prognosis and treatment, to be rational and useful, have to be based on as full and as correct a diagnosis as knowledge permits. The present disposition is to fall short of this, to rest content with an incomplete diagnosis. We say that the patient's "heart is dilated," that he has "arterial degeneration," and that there is "fatty degeneration." But you will remember that we have found that cardiac dilatation may be present in every kind of cardio-vascular degeneration, that the arteries are naturally enlarged and thickened after middle life, and that we refused to call these changes morbid. Clearly, therefore, a purely anatomical diagnosis of this sort is insufficient. If you are asked what the prognosis is of fatty degeneration of the heart you answer that you must first be told whether syphilitic or gouty disease of the coronary arteries, or strain, or alcoholism, or phosphorus poisoning, or anæmia is the cause of it. When you are planning the treatment of dilatation of the heart you first determine whether the dilatation is a result of the stretching of a sound heart by over-filling during muscular effort or of the insufficient emptying of failing chambers with degenerated and feeble walls. Obviously what we ought to determine in these instances and in every instance is the origin of the disease. The ultimate diagnosis to be reached for practical purposes is the etiological diagnosis. Is this possible? Does our knowledge of the nature, characters, and course of these cardio-vascular affections enable us to say after investigating a case what the kind of the pathological change is that constitutes the disease or in what respect the physiological mechanisms are disordered? Can the cause of senile degeneration of the heart and arteries be determined in each instance? How is the practitioner to proceed to do so? What method might be followed with advantage in making a complete diagnosis of heart disease in older subjects?

A man, 60 years of age, consults us about his heart. He says that it has given him a good deal of trouble lately. More specifically he describes a sense of oppression behind the sternum as often as he exerts himself and palpitation with consciousness of irregular cardiac action when he goes to bed. We inquire for other familiar cardiac symptoms, such as pain, angina, fluttering, faintness, giddiness, and a sense of impending death. We find that one or more are present occasionally and that they have increased in number and degree during the last few months or years. Perhaps cough, nocturnal orthopnœa, and dropsy may be beginning to give trouble. The next part of the inquiry relates to the patient's previous history from childhood upwards. Which of the acute diseases has he had? Acute rheumatism, chorea, scarlet fever, typhoid fever, diphtheria, and influenza must be mentioned individually, and in women the nature of any puerperal disease from which they may have suffered. Gout, irregular gout, gravel, eczema, sick headache, and asthma must be inquired after with the same minuteness, and so must syphilis. We next hear an account of any accident which the patient may have met with, such as a blow or a fall from a horse or a carriage. This brings us naturally to question him about his occupation and modes of relaxation and amusements, whether active or sedentary, regular or irregular, their characters otherwise, and their direct effects, including strain. More difficult to elicit is a correct account of the patient's habits in respect of food, stimulants, and tobacco, and his manner of life generally. As I said in my first lecture, this is an inquiry which the family practitioner has an opportunity to carry out much more successfully than the hospital physician or consultant. The family practitioner has known for years of his cardiac patient's work and worries; it may be of his large eating, of his secret drinking, of the history of syphilis in earlier years. It is always well also to inquire after a family history of gout, rheumatism, and heart disease. A list of questions like this sounds far more formidable than it is in reality. A few minutes suffice to arrive at the truth. We already have a pretty fair notion what we have to deal with—whether strain, gout, syphilis, tobacco, an old rheumatic lesion, or a combination of two or more of these. We next proceed to physical examination, beginning with the pulse and arteries, and passing on to the heart and associated structures. The characters of the præcordial impulse, particularly the seat of the apex beat and the strength of the impulse, are closely—I might almost say laboriously—investigated. We must never yield to the temptation to disregard weakness or absence of the impulse. Like many other negative signs, it is apt to be overlooked. Then the præcordial dulness is mapped out by means of light percussion. Finally, auscultation reveals to us the presence or absence of murmurs and the characters of the sounds—in the standing and recumbent postures, and if necessary after a little exertion. The relative loudness of the first and second sounds over the different parts of the præcordia is particularly worthy of note.

Now let us suppose that we have found a mitral systolic murmur. We ask ourselves whether it is structural or whether it is functional—that is, due to relaxation and dilatation of the ventricular walls. If structural, with which (if any) of the diseases elicited in the man's previous history would it correspond? Most probably with gout or glycosuria. Thus we attempt to connect the lesion with its cause and the cause with its effects, and have reached the ultimate diagnosis. So with other valvular murmurs; for example, aortic diastolic murmur proves to be related to syphilis. If there be no murmur audible we naturally think of dilatation with failure, or of enlargement from strain, from Bright's disease, from arterial sclerosis, from emphysema, from an insufficient or impure blood-supply in the coronary arteries, from disordered innervation, or from some rarer cause, such as adherent pericardium; and, again, with these associations in our minds we review once more the patient's history and generally succeed in our diagnosis.

Here let me recount the significance of the principal signs and symptoms which I detailed to you in my last lecture, considered in the reverse order on this occasion, some of which are of real value in differentiating the causes of cardio-vascular degeneration. To begin with negative facts a mitral presystolic murmur is never significant of a senile lesion. Secondly, when we meet with an aortic diastolic murmur, whether alone or along with an aortic systolic murmur, we may safely conclude that we have to deal with something more than atheroma produced by regular or irregular gout and associated metabolic disturbance, cardio-vascular disease of nervous origin, and alcoholic or tobacco heart, even if there be evidence of the presence of one or more of these in the case. Aortic incompetence developed in later life is the result of syphilis or of acute or chronic valvular strain; but of course many instances of this lesion met with after the age of 40 years can be traced to juvenile endocarditis of rheumatic or other origin. Always a serious lesion, aortic incompetence due to syphilis or to syphilis and strain is particularly grave as being so frequently associated with coronary disease and consequent myocardial

[1] Lectures I. and II. were published in THE LANCET of March 9th (p. 692) and 23rd (p. 844), 1901, respectively.

degeneration—fatty or fibroid, acute softening and sudden fatal failure. A fully-developed basic systolic murmur audible over the aortic area and manubrium and along the course of the carotid is a very common sign of atheroma of the aortic arch and valves and great vessels in association with regular or irregular gout, diabetes, corpulence, and allied disorders of nutrition. It is also one of the physical signs of syphilitic and traumatic affections of the aorta and aortic valves and of remote endocarditis. Further, these lesions are so often accompanied by similar degenerations in the coronary arteries and consequent myocardial degenerations that the basic systolic murmur ought, at least, to raise the suspicion of this in the observer's mind. An ill-developed basic systolic murmur is not uncommon in alcoholism, chronic Bright's disease, and nervous strain, but is difficult to dissociate from anæmia. A fully-developed and audible systolic murmur in the mitral area (I mean independently of ventriculo-auricular leakage in cardiac failure) is usually traceable to early endocarditis of rheumatic or other origin, rarely to injury, including ordinary juvenile strain of the valves or walls or to Graves's disease. In some instances it is unquestionably due to valvular atheroma and attendant sclerosis caused by gout or other disturbances of metabolism, including the effects of free living; and in these instances the observer must not overlook the possible association of coronary disease and fatty degeneration. If a systolic mitral murmur prove to be somewhat indefinite and affected by posture, cubitus, and effort, to vary under observation from day to day, and to disappear under treatment, it is of no more value to us in differential diagnosis than that it signifies relaxation and weakness, or disorderly action, of the left ventricle, consequent on any one of the recognised causes of failure or disturbance of the heart, including the different cardiac poisons, overwork, anæmia, acute disease, poverty, and the like, and this, whether in a heart previously sound, or previously enlarged, or previously the seat of valvular disease. An accentuated ringing second sound in the aortic area or more extensively is of great value in the diagnosis of arterial tension and aortic atheroma, or of both, but it is associated with far too many different causes to be of much use in differential diagnosis. It should suggest a most careful search for Bright's disease. Slight reduplication of the first sound is common over senile hearts strained in youth and hearts degenerated by alcoholism and metabolic disorders, and everyone knows that it is not unusual in a variety of other conditions, healthy and morbid. On the other hand, the *bruit de gal·p* or cantering rhythm of cardiac sounds—definite doubling of the first sound followed by loud, accentuated, ringing second sound—is practically pathognomonic of Bright's disease, and is one of the most valuable, because one of the most ominous, of physical signs in connexion with the cardio-vascular system. A normally sized heart with irregularity, increased frequency, and a variable systolic murmur in the mitral area is characteristic of tobacco poisoning. A heart enlarged on both sides and acting irregularly without murmur is, apart from cardiac failure, suggestive of strain in early life.

Cardiac symptoms taken individually are of less diagnostic value than signs. No symptom is pathognomonic. Palpitation is a nearly universal phenomenon of cardiac disease and disorder. Faintness and actual faints are not uncommon in cases of early cardiac strain, gouty heart, and nervous disturbances. Angina we meet with, you will remember, in regular and irregular gout, tobacco heart, strain (especially strain after the age of 40 years), and in syphilis and alcoholism, whilst pseudo-angina is extremely common in nervous women; thus it is of less diagnostic value than might have been expected. A high tension-pulse I have found most often in juvenile strain and cardio-vascular affections of nervous origin, a low-tension pulse in connexion with alcoholic and tobacco-poisoning and with senile strain.

When we review these facts I think we are entitled to conclude that the physical signs and symptoms carefully determined by clinical investigation may be confidently employed, along with the patient's previous personal history and the history of his present illness, to differentiate from each other the causes of cardio-vascular degeneration in individual cases; and, further, that they inform us of the seat of at least some of the lesions, valvular, parietal, and vascular. A little trouble, patience, and attentive observation are all that are required to reach a complete or working diagnosis. Now we may approach the great practica subjects of prognosis and treatment with some confidence.

PROGNOSIS.

Beginning with the simplest kind of cardio-vascular disorder let us see what the prognosis is in tobacco-heart. You will have gathered from what I had to say on this subject in my last lecture, and, indeed, you know as men of observation and experience, that it is comparatively favourable. All the cases I have had an opportunity to watch did well, provided the cause of their distress was avoided and the heart and vessels were otherwise healthy. Further, improvement begins early, and it may be rapid and recovery complete; but you will remember that one patient whose case I detailed to you continued to have alarming angina for six months after giving up tobacco. Recurrence attends resumption of the habit, and some of its votaries contrive to continue to smoke just short of inducing serious discomfort. Unless a successful effort at reform be made cardiac trouble continues indefinitely. But even then I cannot say that I have seen serious damage done by tobacco alone in sound hearts, nor arterial sclerosis, as has been stated by some authorities.

An entirely different and most unfavourable estimate is to be formed of the prospect of life in the alcoholic heart. Naturally a certain proportion of cases recover if the disease be of recent development, the condition uncomplicated, and treatment faithfully carried out. Unfortunately, as a rule, we have to deal with alcoholism in which all these conditions of success are wanting. The habit is established, other organs besides the heart are involved, other diseases than alcoholism are present, and the patient has neither the inclination nor the power to follow our advice. Cirrhosis, neuritis, and dementia complicate the cardiac degeneration, or, more correctly, it complicates one or all of these. Chronic Bright's disease is made to account for a number of deaths in the mortality returns that strictly belong to alcoholism. Occasionally the end comes suddenly from fatty degeneration or in the course of some acute disease; otherwise, as we have seen, by slow cardiac failure and dropsy.

Prognosis in gouty heart—including the heart of the man with gouttiness, glycosuria, and other irregular forms of the disease—is a subject of considerable practical difficulty. In my last lecture I read to you a short account of the case of a friend of my own who had had occasional attacks of gouty angina for 40 years. And certainly a large proportion of the old ladies of 60 or 70 years of age whom you all have had as patients for years on end with weak heart and systolic murmur in the aortic area owe their disablement to gout, if my observations are correct. The lesion proper of the aorta and aortic valves in these cases is atheroma, but the damage is accompanied with repair in the form of sclerosis, which by increasing the loudness of the bruit adds unreasonably to our anxiety about the case. Equally certain it is that patients belonging to this class improve under treatment. Still, the condition of arrest cannot go on indefinitely. In addition to extrinsic dangers, particularly those of Bright's disease, cerebral thrombosis, and hæmorrhage and bronchitis, failure of the heart is liable to supervene and prove fatal from the gravest of all intrinsic causes—namely, coronary degeneration. As this increases the myocardium is steadily more and more impoverished, its contractile vigour declines, and residual dilatation of the chambers sets in with mechanical congestion of the viscera. Complaints of "the heart" increase, the breathing becomes oppressed, the face assumes more and more the characteristic "cardiac" appearance, and dropsy creeps up the lower limbs. Even then the prognosis is not hopeless, for undoubtedly a certain proportion of cases of dropsy in old persons with degenerated heart and vessels are still amenable to rational treatment. But the case has occasionally a more dramatic termination. As I was able to illustrate after my second lecture by a specimen from the museum of Charing-cross Hospital a branch of one of the coronary arteries that has been narrowed by atheroma for an indefinite length of time, with consequent cardiac weakness and discomfort, may any moment become thrombosed rapidly, apparently in consequence of some passing depression or other unfavourable influence, just as in thrombosis of degenerated cerebral vessels. Fatal angina is the result. This is a point of great practical importance—that sudden death will occur in old gouty subjects, not from the lesion of which a basic or an apical systolic murmur is the evidence and which causes us

concern, but from associated coronary atheroma which we probably never suspect; indeed, that it may occur in those subjects with no murmur whatsoever to attract our attention and excite our fears.

Still more unfavourable must be the forecast in syphilitic lesions of the heart and vessels. Of 18 of my cases in which the result was known only one-half improved under treatment, and 20 per cent. of them died within a few years, some indeed within a few weeks of the discovery of their disease. Cardiac failure accounts for most of the deaths, whether developed gradually with dropsy, which proves to be intractable; or progressing rapidly with great cardiac distress, including angina; or occurring suddenly, as it often does. Aneurysm makes its appearance in other instances of which the patient dies, or he is carried off by general paralysis or Bright's disease.

What prospect have we to hold out to the man who has strained the walls of his heart by muscular effort? I believe that one can speak with some confidence on this subject. The middle-aged patient who over-stretched his cardiac walls as a youth may be comforted with the opinion that the condition is not a fatal one. The average duration of 11 cases of this order I found to have been 30 years when they came under my observation; the minimum duration was nine years, the maximum 50 years. This last case deserves particular mention. The patient was first seen by me for failure of the heart with cardiac dropsy consequent on fresh breakdown after exertion during a holiday; and it is most encouraging to observe that compensation was restored by treatment and that now, 12 months after that event, the patient is not only alive but able to carry on light professional work. This case also illustrates what I have told you respecting the course of the affection and the prospect before the patients in long-standing strain—that there is continual liability to fresh embarrassment of the heart during exertion in which they appear to have a lasting inclination to indulge.

Neither is strain of the heart for the first time after the age of 40 years by any means so grave as might be expected. Of course, sudden muscular effort occasionally accounts for sudden death in old men. But it is astonishing how under such circumstances quite old persons do recover from conditions of extreme distress lasting acutely for half an hour—for instance, after running with a heavy bag to catch a train. The majority of my patients described their condition as improved after a time, but others relapsed; and on the whole the correct prognosis is that they must expect to remain variously disabled—that is, liable to præcordial distress and dyspnœa on more than moderate exertion or when subjected to circumstances of other kinds that tax the heart.

Cardio-vascular disorder and disease referable to nervous strain, pure and simple, is amenable to treatment by complete and prolonged rest or relaxation in the majority of instances. Still, death may occur from sudden cardiac failure; or should advice be neglected or soon forgotten, as happens so frequently in these subjects, the attendant high arterial tension and vascular degeneration too often end in cerebral lesions with or without Bright's disease. Of chronic Bright's disease itself and the associated cardio-vascular changes in their prognostic aspects I need not speak except to say that along with syphilis it is by far the most hopeless of all these affections.

In attempting to forecast the life of a man who is the subject of cardio-vascular degeneration in middle or advanced life we must not forget the possibility of the intercurrence of acute disease. Here is a large subject for us as practical men—one far too large and important for discussion here: the effect, for instance, of the existence of enlargement of the heart and an irregular and thickened pulse on the prognosis of influenza, or, let us say, on the chances of a successful issue after operation. Very naturally, unsound vessels and a murmur over the præcordia weigh heavily against the prospect of recovery from pneumonia, for example, and yet how often do we not find a patient of the age of 70 years with one or both of these disturbing conditions come safely through such an illness. Here, again, I believe it is in great measure the true nature of the old-standing disease, not the physical signs, such as irregularity of pulse or mitral bruit, that ought to be taken into account. A heart enlarged and a radial artery thickened by prolonged activity and nothing else will suffice to carry a man safely through an attack of influenzal pneumonia; but what chance is there for the chronic alcoholic under similar circumstances or for the subject of chronic Bright's disease?

So much for the general prognosis in each of these kinds of cardio-vascular disorder and disease. But it is the particular prognosis that we have to attempt to estimate—that is, the prognosis in the individual patient as he comes before us and asks us that trying question: What is my prospect of life and health? We have to do our best to apply such conclusions as those which I have just submitted to you, and at the same time to estimate as correctly as possible the man's personal condition, character, and disposition. After all that may be determined by an analysis of a large number of these cases the patient's prospects in disease of the heart of every kind, degeneration included, greatly depend on how he takes care of himself.

TREATMENT.

Not the least advantage of the etiological standpoint of our survey of the disorders and diseases of the heart and arteries in middle and advanced life is the rational as well as hopeful line of treatment which it enables us to pursue. On the whole we can control morbific influences far more than we can alter pathological processes, and, what is of equal or even greater importance, a knowledge of the causes of disease often enables us to prevent what we could not possibly cure. For all that, the etiology of heart disease furnishes us with but one set of many invaluable indications for treatment. We must have also a clear mental picture of the pathological anatomy of the conditions which we would attempt to modify—for instance, of the damage wrought by gout on the mitral valves and aortic arch, by syphilis on the coronary arteries, and by strain on the walls of the different cardiac chambers. No less necessary is it for the practitioner to take into account before proceeding to prescribe the clinical characters and course of the case in hand. As I have said more than once already, a large proportion of the distress, disabilities, and dangers attending degeneration of the heart are due to some additional or extrinsic disturbance—distension of the stomach, constipation, worry, or exertion, which alone, not the pathological condition, calls for therapeutical attention. It appears, then, that the whole natural history of the diseases and disorders of the heart, and I might add of every individual case, has to be studied and the value of its different parts absolutely and relatively estimated before rational treatment can be ordered. How different will treatment be if ordered on these principles from the routine procedure of prescribing a little strychnia and digitalis for a man with oppression on exertion and a systolic bruit at the base of his heart.

Let us begin this part of our subject with a brief consideration of preventive treatment founded on a knowledge of the cause at work. Now the first thing to strike us about these unfavourable influences is the number of them that could be avoided or controlled successfully by simple exercise of the will. The toxic effects of tobacco, alcohol, tea, &c., are due to abuse, from thoughtlessness or ignorance, or from indisposition rather than inability to exercise self-control. The abuse of tobacco appears to create so much discomfort or even alarm, of a kind which the sufferer cannot fail to refer to its cause, that the remedy is effected automatically and no great harm is done. We seldom have to do more than confirm the patient's suspicions in this direction and recommend temporary abstinence from the cigarette or pipe and greater care in the future. With alcohol it is a different matter. Alcoholism grows by what it feeds on and our best efforts are often vain. The present is hardly an occasion for dwelling on this subject—the duty of the profession to their patients and friends in respect of the abuse of alcohol. Still, I should not feel that I had discharged to the best of my ability, or in full conformity with my strong convictions, the duties of the honourable position which by your favour I occupy as Lettsomian lecturer if I did not urge you to exercise more fully than is at present exercised your personal influence to discourage habitual drinking. I believe (because I have found) that many men who are not open to arguments of an abstract kind can be made to pause and reconsider their manner of living by having a concrete presentment of their condition and its results placed before them—in plain English, by being thoroughly frightened. "Heart disease" is a powerful argument to employ with persons of this class and it is one that is also justified by the issues at stake. Of syphilis and the havoc that it works on the heart, the aorta, and the vascular system generally, but particularly within the nervous system, I need not speak. The profession,

as I have said, is not yet sufficiently alive to it; what can the public be expected to do in the way of prevention? Gout, corpulence, and allied metabolic disorders, those fruitful sources of cardio-vascular disorders and atheroma, call for temperance not only in drinking but in eating. Whilst the question continues to be discussed which particular articles of food ought to be avoided by gouty individuals, let us all join in offering them one bit of advice of the value of which there can be no doubt—whatever they eat, to eat little. Moderation in amount is, speaking broadly, far more important than avoidance of the theoretical antecedents of uric acid, whether meat or milk or sugar. With the observance of this simple and wholesome dietetic rule must go attention to free elimination by all the excretory channels and the insurance of sufficient exercise and enjoyment of fresh air. If we wish to impress this consideration on our own minds and give effect to it in our practice let us call to mind for a moment the number of cases that I have submitted to you of atheroma of the aorta in stout, matronly women of sedentary habits—in whom, indeed, this kind of degeneration is quite as common as in men.

I have already said so much on the subject of cardiac strain that it is unnecessary and would be uninteresting to return to the question of the prevention of it. We have seen how often it occurs in the middle-aged or old subject by ill-considered attempts at athleticism. Moderation and due respect for age are the true guides to the useful enjoyment of exercise after 40 years of age. As for the evil effects of nervous influences on the circulation, in addition to anxiety, care, misfortune, and grief, which are usually beyond our control, nervous strain, as distinguished from simple hard intellectual work, often must be relaxed if cardio-vascular damage is to be prevented. I refer to the cases of persons in positions of great responsibility, with heavy, complex, prolonged duties, which they fail to overtake without exhaustion consequent on high pressure and excitement.

I would not have dwelt so long upon the measures calculated to prevent degeneration of the heart were it not that they have to be employed with equal strictness and perseverance in the treatment of cardio-vascular disease when it is already established and our assistance is sought with anxiety. The etiological indications have still to be respected faithfully; on this I need not dwell. The next question is, What can be done for the pathological changes wrought on the arteries and the valves and walls of the heart? In syphilitic lesions we do not hesitate to say that iodide of potassium should be given freely; it is a specific remedy of great value. Can the atheromatous process be influenced with equal or with any success? It depends on toxæmia and anæmia: the obvious indication is to purify and enrich the blood. This, at least in respect of gout, glycosuria, and corpulence, as we have just seen, must be effected by a thorough reform in every department of personal hygiene. Arsenic and moderate doses of iodides, combined with an excess of alkalies, are calculated to promote the same end. Dr. Mott has shown that atheroma, whether of valves or of vessels, can be traced in many instances to disease of the vasa cordis and vasa vasorum. This carries us a step forward in our quest for indications, but the practical conclusion remains that the healthy nutrition of the smaller arteries has to be restored by attention to the blood and the use of specific remedies.

So much for valvular and vascular lesions. There remains to be discussed the fulfilment of the greater indication for treatment, the one which directs and governs the employment of the most important and successful of all the measures comprised in cardiac therapeutics. This is the establishment and maintenance of compensation. The nutrition and activity of the myocardium can be increased and sustained by means of specific cardiac stimulants and tonics, such as strychnine, ammonia, and the digitalis group of drugs, with hæmatinics, stomachics, and laxatives to insure an abundant supply of wholesome blood, by the control of nervous influences—one of the conditions of healthy nutrition—and by the employment of the non-medical measures now so extensively used to increase the vigour and benefit the metabolism of the cardiac walls, particularly active and passive exercises and baths. Unfortunately, the time left at my disposal in this concluding lecture is not sufficient to justify me in entering into detail on this most interesting subject.

I have now sketched very broadly the rational treatment of these disorders and diseases as far as the object of it is to prevent the occurrence or the extension of them and to promote compensation of the disabilities which they produce. It remains for me to notice, also very briefly, the management of cardio-vascular degenerations when the heart fails or when it appears to fail and distress and danger demand more direct and immediate attention. I have said "when the heart *appears* to fail" of set purpose. I am anxious to direct your attention, if it be but for a moment, to the fact that in many instances where præcordial oppression, pain, palpitation, and faintness, with frequent small, irregular pulse, are significant of serious disturbance of the action of the heart there is no failure of the myocardium in the proper sense of the term, but only embarrassment of a temporary character. Do not conclude from this that I regard the disturbance of the heart as of little account. I have called it serious, for indeed the patient may perish of it. What I wish to maintain is that in cardiac degeneration of any kind, in chronic cardiac dilatation, and in the enlarged heart of Bright's disease and of emphysema, just as in ordinary valvular disease, attacks of distress, alarming both to patient and medical man, often occur which call for nothing more in the way of treatment than attention to some intercurrent influence—an indigestible meal, loaded bowels, a nervous shock, a thoughtless effort, a passing hardship or nervous strain. Digitalis and its allies, strychnine, alcohol, nitrites, iodides, and the rest, are out of place in such an event. Complete rest in bed, a carminative draught, calomel and saline purgatives, spare and highly digestible diet, reassurrance, and a little time are quite sufficient means of treatment.

When true failure occurs, manifested by the familiar phenomena of residual dilatation of the heart, mechanical congestion, and dropsy, a different set of measures are demanded. Now is the time to attend with expedition, energy, and completeness to the fulfilment of the three great therapeutical indications for the treatment of cardiac failure: to reduce the peripheral resistance, to increase the vigour of ventricular contraction and rehabilitate hypertrophy, and to remove arrears of work in the form of residual blood in the cardiac chambers, mechanical congestion of the veins and viscera, and dropsy of the integuments and serous sacs. Bodily rest, a light solid diet and a definite allowance of alcohol if required, active purgation with mercurials, salines, and jalap, and the exhibition of sufficiently large doses of digitalis or one of its congeners, in combination with saline and other diuretics,—these are the means calculated to attain the desired objects. You will not expect me to enter into the many details of the management of cardiac failure. It is not different in any important respect in the man of middle or advanced age with cardiac degeneration from what it is in an ordinary case of chronic valvular disease. Only on a few points do I desire to dwell. First, that we must not be afraid to purge these patients if necessary every morning. Secondly, that when the appetite flags and flatulence occurs, instead of slops a blue pill or dose of calomel should be given and light solids persevered with. Thirdly, that nocturnal restlessness and sleeplessness are to be met unhesitatingly with permission to spend the night in an easy chair by the bedside. Fourthly, that, according to my experience, acupuncture and drainage succeed perfectly in these senile cases with dropsy, as much as 10 pints or more of serum escaping in the course of 24 hours, to the complete and often lasting relief of the circulation.

THE NEED OF MORTUARIES.—An inquest was held at Chard on March 20th upon the body of a newly-born infant. Dr. T. S. Balfour complained that there was no public mortuary in Chard and he said that he had been obliged to conduct the post-mortem examination in the same room in which the mother lay and almost within view of her. The jury concurred with Dr. Balfour and at their request the coroner was desired to communicate with the Chard Town Council on the matter.

CHELTENHAM GENERAL HOSPITAL AND DISPENSARY.—The annual meeting of the subscribers to this institution was held on March 20th under the presidency of Colonel Croker-King. The medical report stated that 871 in-patients had been admitted as compared with 804 during 1899. There had been 7934 out-patients treated as against 8606 in the previous year. The average cost of each in-patient was £4 18*s*. The financial statement showed that the total income amounted to £4911 and that the deficit balance of the institution was now £2013. Colonel Croker-King was re-elected president.

SCLEROTIC HYPERPLASIA OF THE PHARYNX AND NASO-PHARYNX.

BY A. BROWN KELLY, B.Sc., M.B., C.M. GLASG.,
SURGEON FOR DISEASES OF THE THROAT, NOSE, AND EAR, VICTORIA INFIRMARY, GLASGOW.

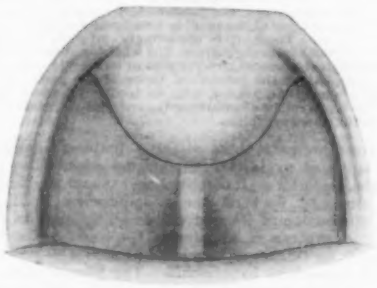
THE case upon which this paper is based is unique in my experience and in that of others, if one may judge from the unsuccessful result of an extensive literary search for references to a similar affection. I therefore believe myself justified in regarding the condition as a hitherto undescribed pathological entity which may not inappropriately be termed "sclerotic hyperplasia of the pharynx."

The patient was brought to me in August, 1899, by his medical adviser, Dr. R. T. Halliday, on account of enlargement of the uvula. He was then 34 years of age and was engaged in a shipbuilding yard. For about eight years he had been subject to slight attacks of sore-throat which had caused, however, no special inconvenience. Three years before I first saw him he began to feel something in the pharynx which he wished to expel; this sensation had gradually increased. Latterly choking fits had been excited by the "something" coming forward on the tongue or passing too far back, as was apt to occur while he was being shaved; he obtained relief in the one instance by pushing the offending body back with his finger, in the other by throwing forward his head. In either case if he did not at once succeed in getting it into its normal position he became panic-stricken and fell to the ground writhing. While in this state he lost control of himself and being a powerful man he was capable of doing great harm. He had, therefore, to avoid being in a crowd, and the barber and others had to be warned to stand clear of him at once should a choking fit set in. In addition, nasal respiration had been partially obstructed for a year, so that he was much troubled at night by the throat becoming dry. The patient was a tall, strong Highlandman who had had no serious illness and no venereal disease. His father and mother both lived to about the age of 70 years and left a family of 12 children, all of whom grew up to be adults.

On examination the pharynx presented a very striking appearance. The uvula was much larger than any I had ever seen and hung like a curtain, concealing the posterior pharyngeal wall. Its length was over one and a quarter inches, its width at the base was one inch, and in thickness it was also greatly increased. The shape and surface were in no way abnormal. The colour, however, was pale and the consistence was fibrous, so that the whole formed a firm unyielding mass.

On bringing the uvula forward on the dorsum of the tongue the posterior wall of the pharynx was found to present a peculiar aspect. A narrow tract of apparently normal tissue ran down the middle of the posterior wall. On

FIG. 1.



each side of this, extending outwards to the lateral wall and incorporating with it part of the right, and the whole of the left, posterior faucial pillar, was a broad prominent band which was thicker in its outer part. These bands passed upwards into the naso-pharynx and downwards to the upper end of the œsophagus. Their consistence was that of muscle and they could be pushed *en masse* towards the middle line. Their colour was a uniform grey and their surface was perfectly smooth. Fig. 1 shows the pharyngeal aspect after uvulotomy. Examination of the naso-pharynx, which was possible only after uvulotomy, revealed marked changes (Fig. 2). The lumen of

FIG. 2.

the cavity was reduced so as barely to admit a forefinger; this was the more striking in view of the patient's height (six feet two inches) and large build. The diminution in the space between the soft palate and postero-superior wall of the naso-pharynx was due partly to the continuation upwards over the latter of the bands above described and partly to thickening of the soft palate. The thickening on the roof, unlike adenoid vegetations, was least in the middle and most marked at the sides. Only a small portion of the septum and middle turbinates could be seen; the choanal arches and Eustachian orifices were concealed. The thickenings in the naso-pharynx, like those in the pharynx, were smooth, grey, and firm. By means of the laryngeal mirror the bands on the posterior wall of the pharynx were seen to pass downwards and to overhang the arytenoids, the sides of the epiglottis being in contact with the bands.

At a subsequent visit, in August, 1899, the greater part of the uvula was removed by means of the galvano-cautery snare without any untoward result. Since then the patient has experienced no discomfort and has considered himself cured. During the interval that has elapsed I have failed—except on the occasion noted below—to detect any change in the conditions described, and Fig. 1 and Fig. 2, which were made shortly after he came under my observation, illustrate the appearances at the present time. The occasion of the exception referred to was in October, 1900. After undue exposure he contracted a sore-throat which was more severe than any he had ever experienced. I saw him on the sixth day when the pain, which was confined to the left side, had begun to subside. There was then great swelling of the left band, especially about the level of the epiglottis; its surface was smooth and pale. Three weeks later the œdema had diminished considerably, so that a view of the larynx was obtainable; it was then found that the movement of the left arytenoid during phonation produced a clicking sound owing to its coming into contact with the overhanging tissues. Although five months have elapsed since this acute attack the left band continues rather thicker than the right and the clicking sound is still heard. Fig. 3 shows the appearances now

FIG. 3.

observed on making a laryngoscopic examination. The piece of uvula removed was preserved in absolute alcohol and the report on its minute structure by Dr. A. R. Ferguson, senior assistant to the Professor of Pathology in the University of Glasgow, follows:—

The piece of uvula submitted was incised longitudinally and paraffin sections were prepared from each portion. The section represents the entire cut surface so obtained.

Low power.—Almost the entire uvula is seen to consist of dense connective tissue of sparsely cellular character and fibrillated in appearance. This is disposed in denser whorls around the vessels, especially the arteries. Immediately surrounding the majority of the

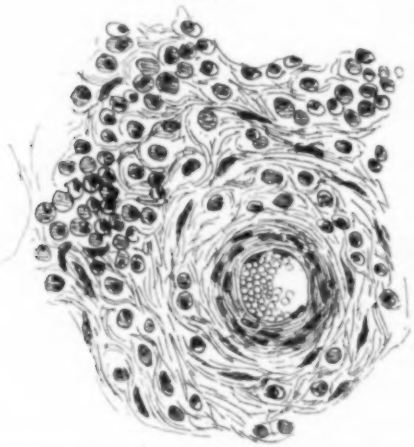
vessels are dense areas of leucocyte infiltration. An irregularly distributed leucocyte infiltration is seen also running beneath the epithelial covering of the uvula. This latter is much compressed in appearance, the corneal layer especially being increased in thickness. The Malpighian layer shows no papilliform processes in any part

FIG. 4

(Fig. 4). Occurring somewhat sparsely throughout the tissue are small groups of adipose vesicles, surrounded and in many cases diminished in size and separated by the dense connective tissue. Mucous gland tissue is abundantly present in the central portion of the uvula. The glandular tissue proper does not seem to have suffered to the same extent as the other portions in the prevailing fibrosis. The interstitial tissue of the glands, however, is densely infiltrated with leucocytes, which are disposed in irregular areas. In the more central parts of the uvula the matrix of the connective tissue is more fibrous than at the periphery and the corpuscles correspondingly fewer in number. The vessels are small but comparatively numerous throughout; they are, without exception, surrounded by an irregular zone of leucocyte infiltration. A few striped muscle fibres, much interrupted and in great part completely isolated, are seen traversing that part of the tissue in which the glandular elements lie.

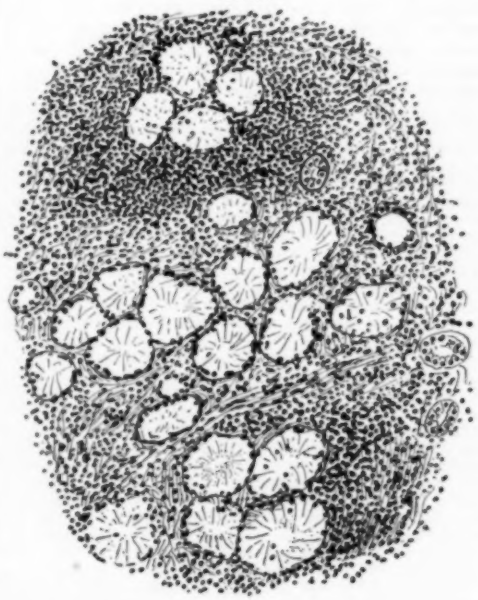
High power.—The epithelial cells of the surface are much altered by compression, having undergone a change comparable with that in the keratinous layer of the epidermis. The deeper layer shows no papillary processes, though the cells are well formed, their columnar character

FIG. 5.



being pretty well preserved. The tissue beneath this layer is a well-formed connective tissue which is finely fibrillated, the fibrillæ forming a very fine-meshed reticulum. The small vessels in this zone are surrounded by leucocytes. These latter are of the small mononuclear type mainly, though many polymorphonuclear leucocytes are also seen. The other cells present are connective tissue corpuscles, many of which are observed in process of division. In this zone of the connective tissue many of the corpuscles have an irregular form with delicate processes; in the main, however, they are of the spindle-shaped type met with in young developing connective tissue (Fig. 5). The fibrillar reticulum can still be distinguished in the midst of these cellular areas. The degree of leucocyte infiltration is more pronounced in the interstitial tissue of the mucous glands than elsewhere. The mucigenous cells show no alteration in appearance, the majority being collapsed with very indefinite outline (Fig. 6).

FIG. 6.



A small portion of the affected tissue was removed from the patient under conditions which precluded its contamination with micro-organisms from any source, and this, after having been cut into small pieces with sterilised scissors, was introduced into a series of sloped glycerine agar tubes. These showed in the course of the second 24 hours of incubation at 37° C. a few small colonies resembling in general appearance, but somewhat larger than, those of streptococcus pyogenes. Film preparations from these colonies showed a short, beaded bacillus which, in forms staining deeply at the extremities, resembled a small diplococcus. Nothing in the least suggestive of bacillus rhinoscleromæ was obtained in the cultures.

Microscopical sections of the uvula were stained by various methods for the demonstration of organisms—e.g., carbol—thionine blue, Loeffler's alkaline methylene blue, Kühne's blue, Gram's method. These, carefully searched, showed no bacillus to be present in the depths of the affected tissue in any part. A few organisms, however, resembling that briefly described above as having been obtained from cultures, were seen between and immediately beneath the deeper cells of the Malpighian layer of the mucous membrane and were only found in this situation. These, it is accordingly inferred, represent but accidental invasions from the surface. The whole condition may thus be briefly summarised, from the point of view of its morbid histology, as a chronic hyperplasia of the interstitial tissue of the parts involved, of apparently progressive character, with no tendency towards degeneration, and (so far as can be demonstrated) unassociated with the presence of any specific micro-organism.

This case presents three striking features—namely, the greatly enlarged uvula, the thick band descending in each half of the posterior wall of the pharynx, and the thickening of the roof and floor of the naso-pharynx leading to a marked diminution of its lumen. In all the regions affected the morbid process is apparently the same, consisting in diffuse uniform thickening, which histologically proves to be a marked interstitial hyperplasia. The development of the disease has been very slow, and is probably still proceeding. In endeavouring to diagnose this condition several diseases have come under consideration.

1. *Rhinoscleroma.*—**In this disease the naso-pharynx is the region most frequently involved and its aspect may come to resemble that presented by my patient. In rhinoscleroma, however, the reduction in the lumen of the naso-pharynx is due to cicatricial contraction and not as here to thickening of the tissues. Further, no description corresponding with the appearances of the uvula or posterior wall of the pharynx**

in this case could be found. The fact, also, that rhinoscleroma has been observed in this country only in persons who have come from districts in which the disease is endemic renders it highly improbable that my patient's ailment is of this nature. Lastly, the absence of the specific bacillus and of Mikulicz's cells almost conclusively disproves rhinoscleroma.

2. *Tertiary syphilis*, owing to the various aspects it may assume in the throat, naturally suggests itself. Inquiry as to the patient's previous health yields no indication of his ever having contracted venereal disease; besides, this morbid process differs from tertiary syphilis in its perfect symmetry, in the absence of any tendency to ulceration, and in its being uninfluenced by iodide of potassium.

3. *Hereditary syphilis*.—Recently I have had under treatment a boy, aged seven years, the subject of late hereditary syphilis. In addition to laryngeal manifestations his palate and uvula presented a smooth uniform thickening which, although less marked, resembled that of the case under consideration. The greater part of the uvula was removed and Dr. Ferguson found, on examining it microscopically, that the enlargement was due to a diffuse fibroid hyperplasia which in its main features closely resembled the histological appearances presented in sections from the case the subject of this paper.

In consequence of the similarity of the histological appearances in the two uvulas it has been necessary to consider—(1) whether the man is the subject of late hereditary syphilis, and (2) whether the sclerotic hyperplasia in the child is independent of syphilis.

I have failed to discover any fact in support of the first question. The patient's parents spent their married life in the Highlands and had a family of 12 children, all of whom reached adult life, the physique of every member being above the average. The patient is the second youngest child and presents none of the stigmata of the diathesis. Owing to the want of corroborative evidence in the personal and family history of the patient, and because of the general dissimilarity of his pharyngeal manifestations to those observed in hereditary syphilis, I believe that this disease may be left out of account as an etiological factor.

The second question, as to whether the involvement of the pharynx in the boy is independent of syphilis, must be answered in the negative. That he suffered from hereditary syphilis when an infant is beyond doubt. It is also evident that the affection of his pharynx is of the same nature as that of his larynx and that the latter resembles the diffuse hyperplastic infiltration of the larynx which has been described in a few cases of hereditary syphilis. On these grounds the hyperplasia of the boy's uvula may be attributed to the diathesis.

While I have been unable to find a disease of which the sclerotic hyperplasia in the man is a manifestion, I would point out that an analogous condition probably exists in subglottic hypertrophic laryngitis. This affection is usually characterised by the presence of pinkish, smooth, firm, symmetrical folds beneath the vocal cords, which develop slowly, apparently in consequence of recurrent inflammatory attacks, during which they become more or less swollen. If we now turn to the case under discussion we find folds of thickened tissue in the pharynx presenting characters similar to those just mentioned; we get a clinical history of his having been subject to sore-throat for years, and of permanent symptoms due to hypertrophic changes having set in only at a comparatively recent date; examination during an inflammatory attack revealed marked swelling of part of the affected region; and, lastly, Dr. Ferguson informs me that A. Sokolowski's[1] account—which is probably the most detailed and thorough—of the histology of subglottic hypertrophic laryngitis might stand for that of the removed portion of the enlarged uvula, the sole difference being that in our case the deeper layer of the epithelium is not thrown into papillæ, but presents practically an even continuous surface, the columnar character of the deepest cells of the rete Malpighii, however, being maintained.

Considerable discussion has taken place as to the nature of subglottic hypertrophic laryngitis. In most text-books the causes mentioned are tuberculosis, syphilis, and rhinoscleroma, the last being probably the commonest. Of 100 cases of scleroma recently reported by A. Baurowicz[2] 34 were affected with subglottic hypertrophic laryngitis. If the frequency of subglottic hypertrophic laryngitis in scleroma be coupled with its great rarity apart from this disease it can be understood how certain observers who live where rhinoscleroma is prevalent—e.g., P. Pieniazek[3] and Baurowicz of Cracow—and who consequently see subglottic hypertrophic laryngitis comparatively often, maintain that it is *always* a manifestation of scleroma. On the other hand, Sokolowski of Warsaw, who has also had an extensive experience of rhinoscleroma, denies this, and proves incontestably, as it seems to me, that subglottic hypertrophic laryngitis may develop independently of scleroma, tuberculosis, and syphilis; he thinks that the morbid process is of a specific nature, the etiological factor being as yet unknown, but he suggests that hereditary syphilis may play a part. A. Kuttner[4] reports a case of subglottic hypertrophic laryngitis in which there were no grounds for suspecting the presence of any of the infective diseases mentioned; he maintains, therefore, that this laryngeal condition may appear as an affection *sui generis* which he proposes to term the genuine form of chordītis vocalis inferior hypertrophica. F. H. Bosworth[5] also states that there can be no question of a simple idiopathic inflammatory process in the subglottic region giving rise to marked hypertrophy, but he thinks that in most instances a diathetic condition is present. There are thus good reasons for according to subglottic hypertrophic laryngitis independent rank amongst the diseases of the larynx.

The facts brought forward in this paper, if correctly interpreted, prove (1) that the pharynx and naso-pharynx may be the seat of a sclerotic hyperplasia unconnected with syphilis, rhinoscleroma, or other known infective disease; (2) that a similar morbid process may manifest itself beneath the vocal cords as subglottic hypertrophic laryngitis; and (3) that in the hyperplastic variety of hereditary syphilis the histological appearances closely resemble those of the above described sclerotic hyperplasia.

Glasgow.

[1] Ein Beitrag zur Pathologie und Therapie der chronischen hypertrophischen Kehlkopfentzündung, Archiv für Laryngologie, Band ii., S. 68; also Band iv., S. 239.

[2] Das Sklerom auf Grund der Beobachtung von 100 Fällen, Archiv für Laryngologie, Band x., S. 396; Zur Aetiologie der sogenannten Chordītis vocalis inferior hypertrophica, Archiv für Laryngologie, Band viii., S. 349.

[3] Heymann's Handbuch der Laryngologie, Band i., S. 1305.

[4] Chordītis vocalis inferior hypertrophica, Archiv für Laryngologie, Band v., S. 276.

[5] A Treatise on Diseases of the Nose and Throat, vol. ii., p. 529.

ON THE EXISTENCE OF IMMUNITY AFTER ENTERIC FEVER.

BY BURTON A. NICOL, M.R.C.S. ENG., L.R.C.P. LOND.,
CIVIL SURGEON ATTACHED TO THE ROYAL ARMY MEDICAL CORPS, SOUTH AFRICAN FIELD FORCE; LATE HOUSE PHYSICIAN, CHARING-CROSS HOSPITAL.

THERE seems to be a very general impression that an attack of enteric fever confers some degree of immunity upon the patient against further attacks of the same disease. The number of patients whom I found suffering from enteric fever in South Africa who had previously contracted the disease in India or elsewhere has made me feel that this conclusion is not based upon very good evidence.

A nursing sister of my acquaintance had two attacks of enteric fever in England during her nursing career, and she contracted the disease for the third time whilst doing duty with the forces in South Africa. An officer had suffered from enteric fever in India, and he also contracted malaria in that country. During the campaign he again became a victim and his illness was followed by three distinct relapses. These relapses did not occur in the usual way during the week or so after the temperature became normal, but came on when the patient was on an improved diet and beginning to get about—i.e., from three to five weeks after the temperature had fallen. This was, of course, altogether an unusual case and may have been complicated by his malarial diathesis. The following two cases are interesting as showing that the supposed immunity produced by very severe attacks of enteric fever was not sufficient to protect the patients for more than six months from a recurrence of their illnesses.

CASE 1.—A civil surgeon, aged 30 years, previously in good health, was admitted to No. 7 General Hospital at Estcourt in May, 1900, with symptoms of enteric fever. The attack was a most virulent one, the patient suffering from

very active delirium during the whole time that the temperature was raised. He had eight distinct hæmorrhages within a few days and the collapse produced by loss of blood was so extreme that he was not expected to recover. The temperature for about a week was between 103·5° and 105°F. He rallied, the temperature fell to normal on the eighteenth day, and from that time he made a good convalescence. He was sent home to England and after spending a month at home he returned to duty. His blood was examined during the illness for the Widal reaction; the clumping and loss of motility of the bacilli were instantaneous. In November, 1900, whilst doing duty at No. 14 General Hospital at Newcastle, this patient again went to bed with every symptom of enteric fever. He had headache, diarrhœa, and during the first week considerable delirium. The temperature ranged for some days between 103° and 104·5° and did not become for 30 days. A very typical roseolar eruption appeared over the whole front of the chest and the abdomen, the back, and the extremities, thus covering every part of the body with the exception of the head and neck. Although the illness was rather a long one it was not regarded as being unusually severe in type and the patient again made an uninterrupted recovery. The Widal reaction was again tried, this time about 10 weeks after the temperature fell. The result was a positive reaction, clumping and loss of motility taking place in about 20 minutes with the usual dilution.

CASE 2.—A private in the 2nd Middlesex Regiment, aged 24 years, was sent from a field hospital to No. 7 General Hospital at Estcourt in April, 1900. On admission he had a temperature ranging from 102° to 103·5° F., was typhoidal in appearance, and had a slight abdominal rash, abdominal fulness, and diarrhœa. The type of enteric fever was considered to be quite of average severity. His temperature fell to normal on the twenty-second day, but after remaining normal for four days it again rose, finally falling on the thirty-fourth day of the illness. Beyond this relapse there were no complications. He made a good recovery and was discharged to the convalescent depôt. This patient ought to have gone to England, but some mistake was made, and after remaining at the convalescent depôt for a month or two he was with others sent back to his regiment at the front. In September, 1900, he again had symptoms of enteric fever and was sent into hospital at Newcastle. On this occasion the attack was quite a mild one, and there was no relapse or any sort of complication. The temperature never went beyond 103° and fell to normal on the nineteenth day. He made an uninterrupted convalescence and on this occasion was sent to England. The Widal reaction was not attempted with this patient in either illness.

In these two cases the attack may have been due to an auto-infection. It is quite conceivable that the bacillus may remain within the body quiescent for many months and only become active at some time when, owing to fatigue, exposure, or other causes the bodily resistance to disease is temporarily lowered. If the natural immunity acquired by a very severe attack of the disease is of any value, however, the patient ought to be protected against the disease whether the cause comes from within or from without. One would also expect to find the degree of immunity varying directly with the intensity of the primary attack.

It is acknowledged by most observers that immunity acquired in this manner, if it exists, is much less pronounced and of more doubtful duration than that produced by other febrile disorders, such as small-pox, scarlet fever, &c. The question of its existence is of considerable importance at the present time as the possibility of procuring an artificial immunity by the present method of inoculation is at least doubtful, if we are not satisfied that an attack of the disease itself protects its victim against further onsets.

The clinical evidence upon the point is necessarily weak. Under ordinary circumstances the cause of the disease is only very occasionally present, and when it is present the predisposing circumstances favouring its development may be entirely absent. The large majority of the population at home, therefore, escape the disease altogether, and it is consequently not surprising if very few of those who have had the disease once contract it a second time. The present campaign will not throw any light upon the problem, as no systematic inquiry has been made as to whether the patient has or has not suffered from previous attacks of enteric fever. Most medical officers, however, have gained the impression that second attacks of enteric fever are fairly frequent, and even third attacks are not unknown. The peculiar frequency of relapses make the consideration of possible immunity much more complex. If the disease produces in its subject changes in the blood-serum antagonistic to the bacilli or their products one would not expect to find relapse so common a phenomenon in the clinical picture.

The experimental or laboratory evidence of an immunity existing consists mainly of the fact that the blood-serum of a patient who is suffering from enteric fever or who has had the disease recently has the power, even when considerably diluted, of interfering with the motility of Eberth's bacillus, and producing that characteristic clumping or agglutination of the bacilli which is known as the Widal reaction. This reaction is a very variable one. The same result has been obtained with the blood-serum of patients suffering from influenza, pneumonia, acute miliary tuberculosis, &c., and the suggestion that these patients at some time in their previous history have suffered from an undetected or abortive attack of enteric fever does not seem altogether to meet these cases. The reaction is also obtained with the serum from patients suffering from bacillus coli infection. The serum of the normal subject if not sufficiently diluted is also not without its effect upon Eberth's bacillus and there is no constant ratio at any time between the intensity of the disease and the intensity of the reaction. Various observers have recorded cases presenting clinically all the appearances of enteric fever but in which the blood-serum gave a negative reaction.

The Widal test is doubtless of great value from a diagnostic point of view, but the very striking fact that serum from patients who have been inoculated produces loss of motility and clumping of bacilli is certainly no guarantee that an artificial immunity has been produced in these cases. A very large number of the cases of enteric fever occurred in young soldiers soon after their arrival in South Africa and amongst these were many who had been inoculated on board ship during the voyage out and in whom the protection being so recent ought to have been particularly good. The very first case admitted into No. 7 General Hospital at Estcourt was one of our own orderlies suffering from enteric fever; he had been inoculated some three weeks previously during the voyage out.

It seems to me that at present there is no proof existing of the presence of an immunity after an attack of enteric fever. Immunity varies so much in different diseases and in different individuals: erysipelas leaves behind it apparently a predisposition to further attacks; diphtheria and pneumonia as far as we know give no protection; whilst an attack of one of the exanthemata usually protects its subjects very effectually. What place enteric fever is to take in this respect has still to be determined. My recent clinical experiences have led me to doubt the existence of any immunity in many cases. A large number of men in this campaign have, however, quite escaped the onslaughts of enteric fever and it is reasonable to think that all must frequently have been exposed to the risks of infection. If we can discover the reason for their resistance to the disease we may then hope to discover some method of general protection. Statistics may show that inoculation is a step in the right direction, but meanwhile we should not forget that the teachings of sanitary science to-day point out clearly many paths along which efforts at prevention can be successfully made.

THE PATHOLOGY AND TREATMENT OF RHEUMATOID ARTHRITIS.

BY P. W. LATHAM, M.D. CANTAB.,

FELLOW AND LATE SENIOR CENSOR OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON; CONSULTING PHYSICIAN TO ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

THE obscurity which envelopes the pathology of rheumatoid arthritis and the doubts which are entertained as to the effects resulting from the administration of drugs induce me to invite further attention both to the pathology and the treatment of this disease.

Notwithstanding the fact that the dystrophic or neural theory is said to be unsupported hitherto by any positive evidence of morbid change in the nerve cells of the spinal cord or in the nerves which supply the joints, I can find no evidence in post-mortem records that either the spinal cord or the sympathetic ganglia have been so carefully examined by modern methods and

appliances as to justify pathologists in asserting that in rheumatoid arthritis these parts are healthy and free from organic change. Until Heine[1] formulated his views of the nature of the lesions accompanying infantile paralysis, based solely on an analysis of the symptoms, the lesions in the spinal cord in this disorder were overlooked; they were, however, readily recognised afterwards in a certain number of necropsies when attention had been called to the matter. I venture to think that the clinical symptoms also in rheumatoid arthritis furnish undoubted evidence of pathological change in the nervous centres, the exact nature of which can only be determined by further microscopical investigation. Furthermore, I shall endeavour to show that this view is supported by the results of treatment directed specially to the nervous centres.

Leaving out of consideration for the present the causes which induce changes in the joints themselves I would point to the distinctly neurotic character of the antecedents and accompaniments of the arthritic trouble. As antecedents there are the neuralgic pains, so often wrongly termed "rheumatic," affecting one or more of the limbs, the feeling of weariness or of numbness or tingling, symptoms to which Dr. Spender has called attention, sometimes affecting only one nerve or the whole of one limb, sometimes being localised along the spine or across the loins. According to Trousseau and Remak in women the disease is often preceded by megrim. Not unfrequently worry, anxiety, or shock appear to have been the factor originating the disease. As an accompaniment of the arthritic mischief we see the marked atrophy of the muscles which in many cases supervenes and is developed much more quickly than can be attributed to mere disuse. In fact, in some cases, as Dr. Ord has pointed out, "the muscular wasting precedes the osteo-arthritis." Now it seems incredible that this muscular atrophy, if it has lasted for any time, whether it be primary or secondary, can exist unassociated with degenerative changes in the spinal cord, and it is reasonable to assume that such changes are similar to those associated with infantile paralysis or with chronic anterior polio-myelitis, in which we have material lesions of the cord involving the antero-lateral columns, marked proliferation of the connective tissue elements, with swelling and subsequent pressure upon and atrophy of the anterior roots of the nerves supplying the affected muscles, with more or less complete disappearance of the multipolar cells, changes which in many cases can only be discovered when carefully sought with the aid of the microscope.

"Pathological facts appear to show that the trophic nerves of the bones and joints are found in the mixed nerve trunk and that they issue along with the motor fibres from the anterior cornua where they are, like the muscular trophic fibres, connected with a group of large caudate cells. It is impossible to say at present in what way these trophic fibres and cells are connected with the brain, but some connexion doubtless exists."[2] With regard to the nature of the injury which will give rise to active muscular atrophy, 'it seems now generally admitted that both irritative and destroying lesions of the ganglion cells of the anterior horns of the spinal cord, and their homologues in the medulla oblongata, pons, and crura, or of the efferent fibres which unite these cells with the periphery may give rise to active atrophy of muscle. But whether the same kind of cell exercises both motor and trophic functions, or there exist separate cells for each function, is as yet undetermined."[3] In infantile paralysis, however, the changes in the bones and in the joints are of a different character to those of rheumatoid arthritis, nevertheless clinical experience has taught us that injuries to the spinal cord or even to the nerves of a limb will set up arthritic changes which cannot readily be distinguished from those seen in the earlier stages of rheumatoid arthritis. Dr. Weir Mitchell, Dr. Moorhouse, and Dr. Keen were the first to call attention to the effect of nerve injuries on the nutrition of the joints. The symptom occurs within a few days after the injury to the nerve. "It consists essentially in a painful swelling of the joints which may attack any or all of the articulations of a member. It is distinct from the early swelling due to the inflammation about the wound itself, although it may be masked by it for a time; nor is it merely a part of the general œdema which is a common consequence of wounds. It is more than these—more important, more persistent. Once fully established, it keeps the joints stiff and sore for weeks or months. When the acute stage has departed the tissues about the articulations become hard, and partial ankylosis results, so that in many cases the only final cause of loss of motion is due to this state of the joints. Of all the agencies which impede movement it is the most difficult to relieve. Were we asked to state in what essential respect these lesions differ from subacute rheumatic disease of the same parts, we should certainly be at some loss to discern a difference."[4] In a subsequent work[5] Dr. Weir Mitchell again refers to the curious arthritic changes which may follow dislocations, ball-wounds, contusions, or even compressions of the nerves. "We may have one articulation—and if only one, a large one—involved, or perhaps all the joints of a finger, or every joint in the hand or of the entire limb may suffer. The swelling is never very great, the redness usually slight, and the tenderness on touch or motion exquisite. This condition of things remains, with little change, during weeks or months and then slowly declines, leaving the joints stiff, enlarged, and somewhat sensitive, especially as to movement. A small proportion of such cases find ready relief, but in many of them the resultant ankylosis proves utterly unconquerable, so that it is vain to break up the adhesions under ether, or to try to restore mobility by manipulation on splints. All alike fail and serve only to add to the essential tortures of the accompanying neuralgia and hyperæsthetic states of skin. Since writing my last paper I have met with some of the former patients who suffered with these troubles, but in no case originally very severe was there any great gain; indeed, in most of them the joints had become every year more stiff and useless. It is then quite clear that injuries of the spine, diseases of this organ and of the brain, and wounds, or any form of lesions of nerves, are capable of developing in the joints inflammatory conditions, usually subacute, and which so precisely resemble rheumatic arthritis in their symptoms and results that no clinical skill can discriminate between the two." The following case is recorded by Sir William Gull[6]:—

CASE 28. *Concussion of the spine; partial paraplegia; redness and swelling of the wrists and ankles as in acute rheumatism; recovery.*—N. T., aged 38, on Jan. 22nd, 1856, inadvertently stepped backwards into a hole, a few feet deep, and received a concussion of the spine. After a few days he became partially paraplegic, with weak sphincters, and at the same time there came on a diffused redness and swelling of the ankles and wrists. The swelling was not from effusion into the joints but from œdema of the surrounding tissues. The joints were very painful. The redness and swelling were variable in degree. When most marked they presented the usual appearances of rheumatism, or rather of gout, for the erythema was brighter and the œdema more distinct than in rheumatism. The hands were equally affected with the ankles, though there was no obvious want of muscular power or any affection of sensation in the upper extremities. Tongue clean. Pulse 120. No acid perspirations. Urine high coloured, free from deposits, of normal quantity. The nerves of the surface generally were hyperæsthetic to a slight touch but deep pressure gave less inconvenience. The treatment consisted of good nourishment, wine and brandy freely administered, and opium to allay pain and overcome sleeplessness. The pulse gradually acquired more power, and sank to 80. The affection of the joints continued in varying degree through March, April, May, and June. From the beginning of April, there was an improvement in the power over the legs. The same treatment was continued throughout, without the use of mercurials, local depletion, or counter irritation. In June the patient was able to walk without assistance. During sleep the hands and feet, wrists and ankles, often become erythematous and swollen. There was occasional formication in the lower extremities. Sleeplessness, from the beginning of the case and throughout, was a troublesome symptom. In July the patient was able to leave the hospital and to resume to some extent his duties as medical practitioner. He was under the care of my colleague, Mr. Cock.

Further we have the arthropathies consecutive on lesions of the nervous centres, cerebral and spinal, which Scott Alison, Brown-Séquard, and Charcot have described, the tumefaction, redness, and pain of the joints closely simulating acute rheumatism or gout. So far back as 1831 Professor J. K. Mitchell[7] reported some cases of a striking character

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Beobachtung über Lähmungszustände der unteren Extremitäten, u.s.w., Stuttgardt, 1840.

[2] Ross: Diseases of the Nervous System, second edition, vol. i., p. 267.

[3] Loc. cit., vol. i., p. 241.

[4] Gunshot Wounds and other Injuries of Nerves, by Dr. Weir Mitchell, Dr. Moorhouse, and Dr. Keen. Philadelphia: 1864, p. 83.

[5] On Injuries to Nerves. London and Philadelphia, 1872, p. 168.

[6] Guy's Hospital Reports, third series, vol. iv., 1856. Sir William Gull's remarks on Case 27, loc. cit., are of the greatest interest and are highly instructive and suggestive.

[7] On a New Practice in Acute and Chronic Rheumatism, by J. K. Mitchell, M.D., American Journal of the Medical Sciences, 1831, vol. viii., p. 55. This paper is not easily obtained now. I considered it of so much interest and importance that I printed it as an appendix to the Croonian Lectures "On Some Points in the Pathology of Rheumatism, Gout, and Diabetes," delivered at the Royal College of Physicians of London in 1886.

in which arthritic symptoms supervened upon injury to the spinal cord. These cases were successfully treated by applying from eight to 16 cups, abstracting about as many ounces of blood from the neighbourhood of the cervical or lumbar enlargements, according as the upper or lower extremities were affected, and if the cupping did not afford relief applying blisters to the same regions. The following most interesting case, which came under my observation in Cambridge, illustrates, I think, very well the development of arthritic mischief from irritation of the central nervous system, the irritation being chiefly localised in the medulla oblongata and affecting the vaso-motor centre. It further illustrates the beneficial effects of Professor Mitchell's plan of treatment by cupping and blistering.

F. J. W., aged 54, a labouring man, was working on a stack in the dusk of early morning on Dec. 24th, 1885, when he fell, dropping about eight feet, on to his left side. He walked home, with pain and difficulty, a distance of over a mile; he went to bed, lay there drowsy and without appetite, very helpless, and only just able slowly to move his limbs. After remaining a week in this condition he was carried into Addenbrooke's Hospital on Dec. 31st, 1885, under Mr. G. E. Wherry, to whom I am indebted for an opportunity of seeing the patient, as well as for the notes of the case. When admitted he was drowsy and stupid, and answered questions in a dull manner when roused; cutaneous sensation seemed everywhere perfect; movements of the limbs were very slow, difficult, and painful; turning over in bed was a struggling tedious process. The grip of the hands was very feeble, especially the right; no rigors, no sweats; no bladder symptoms. Bowels confined. His health had always been good, and he was working daily up to the date of his accident. Jan. 1st, 1886.—Some swelling of the left wrist and fingers, and both ankle-joints, with pain on movement, and tenderness; relieved by an opiate. Heart-sounds normal. Evening temperature, 101·6° F. Jan. 2nd.—Marked swelling and redness of the left wrist-joint and of the joints of the first and second fingers, with œdema, and angry red appearance of the back of the wrist. Slight swelling also of the right wrist and finger-joints. It was extremely tender, and looked as if it would suppurate. Beads of sweat on left forehead; a few small herpetic vesicles are seen along the course of the left supra-orbital nerve; tears and secretion excessive in conjunctival sacs of left eye; pulse 80; considerable œdema of both ankles. Patient is drowsy, and sleeps except when roused by pain. No general sweating; urine acid. Bowels open by calomel. Evening temperature 101·4°. Jan. 3rd.—Redness and swelling in left wrist continues, as well as in both ankles; drowsiness and stupor; muco-pus in conjunctival sacs of left eyelids, not in the right. The knees usually drawn up in bed, of which movement he does not seem conscious; he can put them down by an effort. Morning temperature, 100·2°, evening, 101·8°. After consultation with Dr. Latham he was cupped at the root of the neck behind in two places, about two ounces of blood drawn; no relief that night. Evening temperature, 101·8°. Jan. 4th.—He seemed better and in less pain. Morning temperature, 100·2°; evening temperature, 101·6°. Jan. 5th.—Less pain and tension in the joints; morning temperature, 99·2°. His manner still stupid and dull. Two cups were applied near the lower cervical vertebræ and two near the lower dorsal vertebræ and about four ounces of blood drawn. He was ordered to take at once five grains of calomel and one grain of opium, and a black draught the following morning if necessary. Evening temperature, 101°. Jan. 6th.—Better. Morning temperature, 100°; wrists and ankles less swollen. Bowels open three times after the calomel. Evening temperature, 101°. Ordered tinct. opii (30 minims) at bedtime. Jan. 7th.—Wrists and ankles better. Complains of pain in right knee, with some tenderness, but there is no swelling. Morning temperature, 100·4°; evening, 100·8°. Ordered four blisters, 1½ × 1½, to four spots along the spine, to be kept open with savine ointment. Opiate to be taken every night. Jan. 9th.—The right foot and ankle more painful and swollen. The other joints better. Morning temperature, 101·2°. Ordered a blister, 4 × 3 inches, over the lower dorsal vertebræ. Evening temperature, 101·6°. Jan. 10th.—Feels better; has had a good night, has no longer the dull, stupid manner, mind clear; was ordered tinct. opii (10 minims) three times a day; the blister to be kept open with savine ointment. From this time continuous improvement took place. The evening and morning temperatures fell daily until the 19th, when the evening temperature reached the normal point, and the blistered surfaces were allowed to heal. There was some œdema about the affected joints after the redness and pain had passed away, but this entirely disappeared by the 23rd. There was still at this date a little tenderness and thickening about the left wrist. The unilateral sweating of the face was noticed from time to time. Feb. 2nd.—The patient's condition much improved. Is sitting up. Has lost all pain, except now and then in left wrist. There is some thickening and stiffness about the joints which were affected, and his grip is still weak, though very much stronger than before.

Upon the foregoing data it is not unreasonable to assume that the joint troubles in rheumatoid arthritis are due to spinal congestion or chronic myelitis chiefly affecting the ganglion cells of the anterior horns, but extending also, when the disease is associated with "glossy skin," to the ganglion cells in the posterior horns.[b] If this is the case the natural inference would be that, in the earlier stages of the malady, at all events, the treatment should be directed to the abatement of this spinal congestion and that probably this can be most effectively done by cupping or blistering the spine. On these grounds, therefore, this plan of treatment was adopted in the following cases.

[b] Pathological observations render it probable that the ganglion cells of the anterior horns exercise a controlling influence upon the nutrition of the bones and joints, while those of the posterior horns stand in a similar relation to the nutrition of the skin and its appendages.—Ross, loc. cit., vol. i., p. 825.

CASE 1.—A farm-labourer, aged 19 years, was admitted into Addenbrooke's Hospital on Jan. 8th, 1896. He had always enjoyed good health until September, 1894, when he was suddenly seized with pain in the left chest, which was soon followed by pain in both knees and shoulders, but without any swelling of the joints. He remained in bed for a fortnight and at the end of eight weeks he resumed his work, feeling quite well and with no shortness of breath. He remained quite well until 10 weeks previously to being admitted into the hospital, when, without exposure to cold or any other assignable cause, the right hip became painful. The pain spread to both knees, shoulders, feet, and hands. For the last 10 days all the joints of both hands had been swollen and for a week the ankles also had been swollen. The patient had a dark complexion and a healthy aspect. The skin was hot but not perspiring. There was no rheumatic odour. The tongue was clean and the bowels were regular. In the left axilla there was an enlarged gland of the size of a walnut and another of smaller size in the right axilla. There was a soft systolic murmur at the heart's apex, with an accentuated pulmonary second sound. The wrists, the knees, and the ankles were swollen, distended with fluid, and painful. All the phalangeal joints were tender and swollen. There was pain in the left shoulder and in the left side of the neck which was increased on movement. The patient's temperature on admission and for some 10 weeks varied between 100° F. in the evening and 99° in the morning, and the remedies employed (though without much advantage) were bark, salicylates, colchicum, quinine, and iodide of sodium, cod-liver oil, and arsenic. About the middle of May a normal temperature was reached. Arsenic was prescribed after meals, and iodide of sodium and bark in the intervals between meals. These remedies, with massage, were continued until June 26th, when the patient was discharged. He was able to hobble about, but he had not been greatly benefited. After his discharge his symptoms improved somewhat, so that he was able to walk up and down stairs, but the swelling of the joints remained unchanged. At the end of September he was troubled with increased pain in both hips and shoulders, but with little or none in the hands or knees. He was readmitted into the hospital on Nov. 4th in the following condition. Both wrists and all the joints of both hands were distended with effusion but without any crepitus. There appeared to be some thickening of the lower ends of the bones of the forearm, but very little bony deformity of the phalangeal joints. Both knee-joints were distended with fluid and the extremities of the bones were thickened. The shoulder-, elbow-, and ankle-joints appeared to be normal. There was great muscular atrophy of all the limbs, especially of the calves of the legs. The vertebral joints were stiff but not tender. The hands and feet were constantly moist. During the first 14 days after readmission his temperature ranged between 100° and 98·4°. He was placed on full diet and was treated with arsenic, iodides, bark, and opium, cod-liver oil, hot-air and hot-water baths, massage, &c., with varying effects on the disease, but with no marked benefit until the beginning of April. It was then decided to try the effect of continuous counter-irritation of the spine. A skiagram was taken of the left hand, of which Fig. 1 is a copy, and measurements were taken of the wrists and fingers with the following results. April 6th: right wrist, seven and five-eighths inches; joint between the first and second phalanges of the first finger, three inches; joint between the first and second phalanges of the second finger, three inches. A cast of the left hand was also taken, of which Fig. 2 is a drawing. The left wrist measured eight and a quarter inches. A blister three inches by three inches, which had been painted over with liquor epispasticus, was applied over the seventh cervical spine for 12 hours and the blistered surface was afterwards kept open for a fortnight with a daily dressing of savine ointment and was then allowed to heal. Full diet, cod-liver oil, arsenic, and tincture of bark were prescribed. On April 23rd a blister of similar size was applied over the last dorsal and first lumbar vertebræ and was kept open for a fortnight with savine ointment. The joints felt easier after the application of the blisters, but there was very little diminution in their size for the first four weeks. On May 27th the finger-joints gave the same measurements as on April 6th—viz., three inches. The left wrist now measured only seven and three-quarter inches, being half an inch less than before. The right wrist was also seven and three-quarter inches in circumference, or an eighth of an inch more than before. The limbs were now massaged every other day and the patient had a warm bath

FIG. 1.

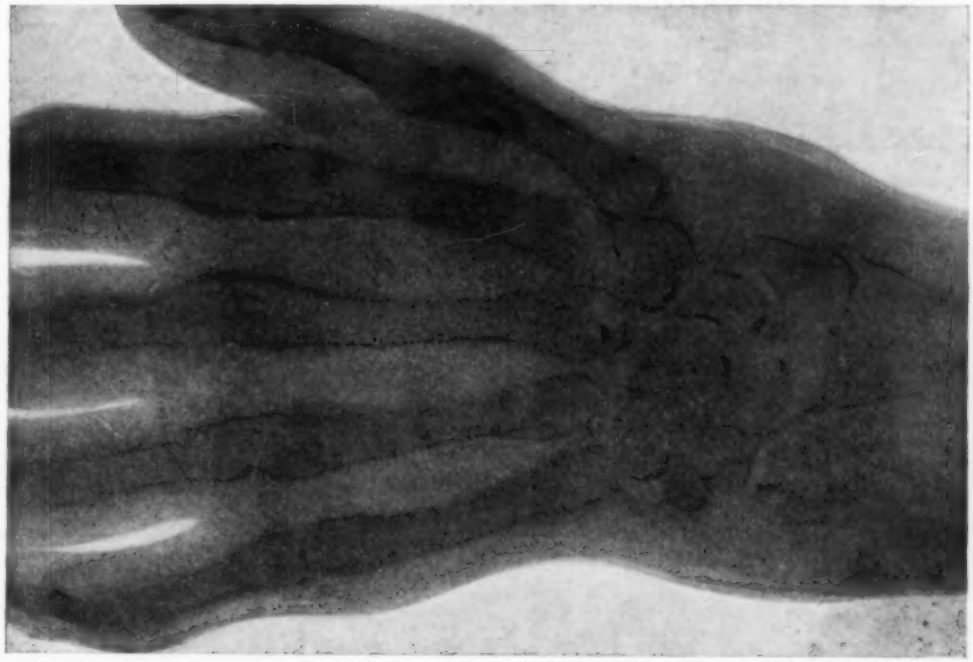


FIG. 2.

FIG. 3.

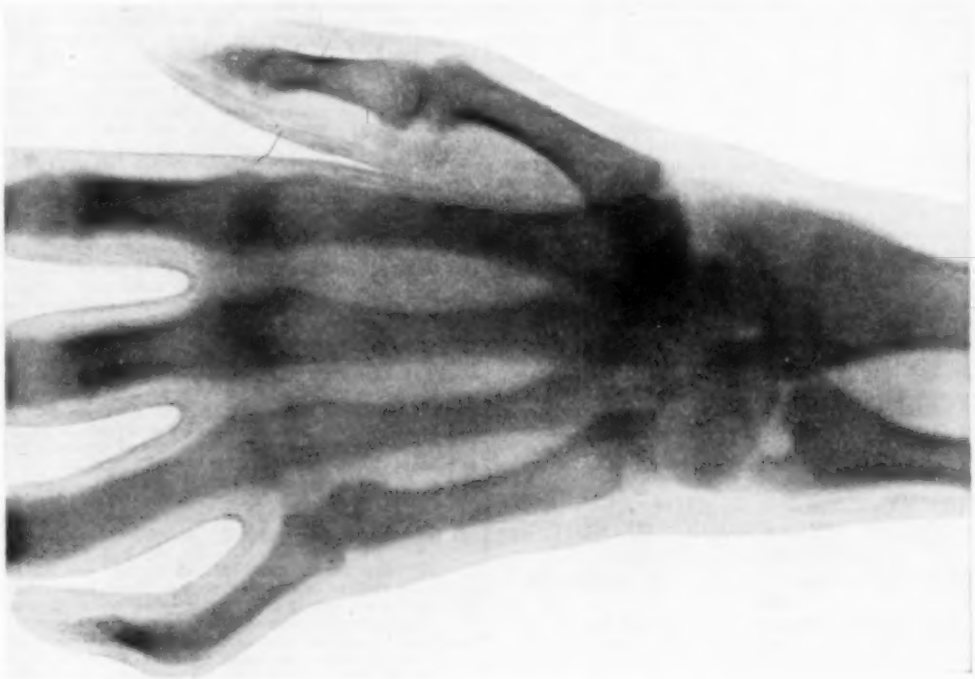


FIG. 4.

every other evening. Blisters three inches by one and a half inches on either side of the seventh cervical and last dorsal vertebræ were subsequently applied. At the end of June the joints had distinctly diminished in size, the two wrist-joints each measured only seven and a half inches and the joints of the first and second fingers of the right hand had decreased to two and three quarter inches. The patient was able to walk about with the aid of a stick; the movement of the joints was limited but there was a fair range obtained by the knees and ankles. His general nutrition had greatly improved. His face was fuller and he had a healthier appearance. The limbs, though thin, had gained considerably in circumference, the calves of the legs being nearly treble their former size. Food was taken well and he complained of no pain. He remained in the hospital until August 7th, being treated with massage and baths. He now looked in good health and was able to hobble about without the aid of a stick. The measurement of the joints was the same as on the last occasion. The wrists could be easily extended, but flexion was somewhat limited, the metacarpo-phalangeal and phalangeal joints were stiff and the grasp was feeble. There were some adhesions about the hip-joints and forced movement gave him pain. The knee-joints were still a little swollen, but they had a fair range of movement, and there was free movement of both ankles. Before he left the hospital the skiagram (Fig. 3) of the left hand and the cast (Fig. 4) of the same were taken. The changes which had taken place can be seen by comparing these with Fig. 1 and Fig. 2. On Sept. 27th the patient came to report himself at the hospital. He was able to walk better and there was freer movement of all the joints. The right and left wrists now measured only seven inches in circumference and had a fairly normal appearance. The finger-joints measured the same as on August 7th.

In this case I believe that the improvement in the patient's wretched and hopeless state was almost entirely due to the counter-irritation kept up from time to time for several days in the region of the lumbar and cervical enlargements.

The following case of a patient who was recently admitted into St. George's Hospital under the care of Dr. A. C. Latham (to whom I am indebted for the notes) is a further illustration of this mode of treatment.

CASE 2.—A widow in domestic service, aged 47 years, was admitted into St. George's Hospital on Dec. 19th, 1900, with the following history. In October, 1898, having previously had no serious illness, she suffered from influenza followed by an attack of pneumonia. In December of the same year she was seized with sudden pain in the right knee and right hand, but unattended with much swelling or heat. The left knee and left hand were shortly afterwards affected. The pain had persisted on and off up to the time of her admission into the hospital, and together with the difficulty experienced in moving her joints had prevented her from following any employment for the previous two years. Her legs had become weak and she had lost flesh during the past year. The appetite had been bad and the bowels were generally constipated. The patient was a teetotaler. There was no history of rheumatism. The catamenia had ceased three years previously. She was a spare anæmic woman and she looked older than her stated age. Both wrists were enlarged and swollen, the movements were very limited, and the outline over the carpal bones was indefinite. The metacarpo-phalangeal joints of the first fingers were swollen and there was much grating on movement. The knees were both enlarged, especially the right, the enlargement being on the inner aspect. The right knee felt hot to the touch, could not be completely extended, and could only be slightly flexed. The left knee could be both extended and flexed and the patella was moveable. There was no lateral movement of either knee and grating was marked in the right knee. The temperature was normal. The patient was placed on ordinary diet and the bowels were regulated with calomel and saline aperients. On Dec. 27th a blister six inches by two and a half inches was applied to either side of the upper lumbar vertebræ and the blistered surface was kept open for a week with savine ointment. Within a week of the application of the blisters the patient complained much less of pain in the knees; the right knee was less swollen and less hot, whilst the condition of the left knee was practically normal. On Dec. 30th daily massage of the limbs and joints was ordered. On Jan. 2nd, 1901, the patient was ordered three minims of hydrochloric solution of arsenic with five minims of diluted nitro-hydrochloric acid three times a day. Her general condition was much better and the knee-joints were almost free from pain, but the wrist-joints, although improved, were still considerably swollen and rather painful, especially at night. On the 13th two blisters four inches by two inches each were applied one on either side of the lower cervical and upper dorsal vertebræ, and later the surfaces were dressed with savine ointment. The dose of arsenic was afterwards increased to five minims three times a day. On the 21st the patient's knees and wrists were much better; they could be freely moved without any pain. On the 30th she was discharged. The difference between her condition when she was first brought in a cab and assisted by her friends into the hospital and her condition when she left, able to walk without a stick and free from pain, was most striking.

In the earlier stages, then, of rheumatoid arthritis I think that continuous counter-irritation of the spine is of distinct service and that it may also be usefully employed in the acute polyarticular variety. But when the disease is advanced, the ends of the bones enlarged, and the cartilages destroyed one cannot hope to restore these to the normal condition by any counter-irritation. Such a measure would only increase the patient's discomfort. Nevertheless, in chronic cases, where there are from time to time exacerbations of pain and swelling in some of the larger joints, the application of blisters to the spine is of use; and I have seen these conditions very quickly alleviated thereby and the further extension of the disease arrested.

Cambridge.

A CASE IN WHICH A LARGE PYLORIC TUMOUR DISAPPEARED AFTER GASTRO-ENTEROSTOMY.

POST-MORTEM EXAMINATION ELEVEN YEARS AFTER OPERATION.

BY FRED. BOWREMAN JESSETT, F.R.C.S. ENG.,
SURGEON TO THE CANCER HOSPITAL, BROMPTON.

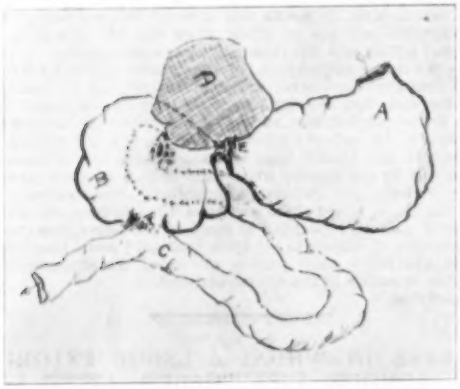
I VENTURE to think that this case is worthy of record inasmuch as it is one in which a tumour of the size of a small coccanut completely occluding the pylorus, having all the naked-eye appearance of a carcinomatous growth, disappeared after operation, also because of the length of time the patient lived after the operation in perfect comfort.

The patient, a widow, aged 56 years, was admitted into the Cancer Hospital, Brompton, on Feb. 14th, 1890, suffering from pyloric obstruction. She had had four children, the youngest being 22 years old. The menopause had occurred six years previously. The patient, who had always been delicate, had suffered from indigestion for a considerable time and had noticed a lump in her abdomen for over a year. She had been confined to her bed for about a fortnight complaining of pain in her chest and back, vomiting, flatulence, and constipation. The symptoms of indigestion had been more or less present during the last eight or nine years. There had been no hæmatemesis. The vomiting, however, increased in frequency, the pain became very acute, and she gradually continued to get worse until November, 1889, losing flesh rapidly and suffering intense pain. At this time everything she ate was vomited usually a few hours after eating. The tumour, which was situated in the epigastric region, gradually increased in size.

On her admission the tumour was found to occupy nearly the whole epigastric region situated apparently over the pylorus and extending along the anterior wall of the stomach; it was moveable and also moved on respiration. The stomach was enormously dilated, extending as low as the pubes. The patient vomited once or twice a day a brownish fermenting fluid filled with sarcinæ. She was very emaciated and weak. The urine was that of a healthy person. The stomach was washed out twice a day with a solution of salicylate of soda and nutritive enemata were given. All food given by the mouth gave great pain and was vomited shortly after. From the size and fixity of the tumour pylorectomy was negatived and it was decided to perform gastro-jejunostomy; this was done in April, 1890, by means of Senn's decalcified bone plates and the patient made an excellent recovery. At the time of this operation the tumour was carefully examined and was found to be

situated at the pylorus and had all the appearances of scirrhus; it was adherent to the surrounding parts and was of the size of a small cocoa-nut.[1] The patient left the hospital some two months after the operation, and has been seen periodically until the time of her death from apoplexy in November, 1900.

At the post-mortem examination, conducted by Mr. C. N. Barton, the stomach was found to occupy practically its normal position, but there was a constriction about its centre forming a typical hour-glass contraction (see illustration), the



Diagramatic sketch of a case of gastro-jejunostomy. Death 11 years after operation. A, Larger pouch of stomach measuring 5 × 4 inches. B, Smaller pouch, 3 × 3 inches, containing opening of pylorus. C, Jejunum. D, Left lobe of liver. E, Cicatricial band of adhesion between liver and stomach which by contraction caused division into pouches A and B. F, Site of operation (gastro-jejunostomy). G, Pylorus.

point of constriction being firmly adherent to the left lobe of the liver. The jejunum was seen to be fixed to the anterior wall of the stomach at the seat of operation in the lower part of its distal pouch. The duodenum was of its normal calibre and apparently had continued to a certain extent in conjunction with the gastro-jejunal opening to perform its normal functions. On opening the distal pouch of the stomach the opening between it and the jejunum was found to be large enough to admit two fingers. At the constricted portion of the stomach the opening between the two pouches was very small, barely admitting one finger. The pyloric opening situated immediately behind the constriction admitted one finger with difficulty. The constricted portion was hard and firmly adherent to the left lobe of the liver. This was the only remaining sign of the large growth found at the time of the operation. The stomach walls were normal; there was no thickening. All the other organs were healthy.

There are many points of interest in this case. First, at the time of operation the tumour had all the macroscopical appearances of a case of carcinoma of the pylorus causing obstruction. At the necropsy the pylorus was found to be patent although somewhat constricted, the mucous membrane covering it being apparently quite healthy; the pyloric orifice was situated immediately behind the constriction, which undoubtedly represented the seat of the tumour, so that possibly the tumour being in this position by its size blocked the pylorus which apparently was not implicated in the growth, and as the growth became atrophied and the obstruction removed the opening again became available for the passage of food. Secondly, it is most remarkable that this growth should have so completely disappeared leaving only a small contracted cicatrix adherent to the liver to indicate its position. There had never been any vomiting of blood or other indications to account for its disappearance. Indeed, the tumour was quite prominent and had been demonstrated on several occasions after the operation up to within about two years of the patient's death when only a slight thickening could be detected. Thirdly, although evidently food had passed by the pylorus, yet the opening between the stomach and jejunum formed the main opening for the passage of the food from the stomach into the intestine. The communication between the proximal and distal pouches of the stomach formed by the contraction and cicatrisation at the seat of the tumour was very narrow, barely admitting the index finger, and it is difficult to understand why the patient did not suffer more inconvenience than she did from the passage of food from the one pouch to the other.

A somewhat similar case is recorded by Dr. Demoulin and Dr. Tuffier.[2] It was that of a naval lieutenant, aged 32 years, who suffered from severe dyspeptic symptoms early in 1897. In 1898 a hard swelling developed in the epigastrium; all medical treatment was of no avail and the patient became emaciated. The swelling was as large as an orange. Malignant tumour was diagnosed and Dr. Demoulin operated on Dec. 1st, 1899. A soft tumour was found situated around the pylorus and the adjacent parts of the stomach and the duodenum and it felt like a fatty growth; there were no enlarged glands. The patient was so exhausted that pylorectomy was considered impracticable; Dr. Demoulin therefore performed gastro-enterostomy. The patient made a slow recovery. On the twentieth day after the operation Dr. Demoulin palpated the epigastrium and to his surprise the tumour could no longer be felt, its site being marked by a little thickening which vanished within ten days. In May the patient was again on active service.

The case is also of interest read in conjunction with the case of Hour-glass Stomach and Pyloric Stenosis; Gastro-enterostomy, Death, recorded by Dr. Sidney Martin and Dr. Bilton Pollard.[3]

For the outline drawing of the specimen I am indebted to Dr. C. Davis, house surgeon to the Cancer Hospital, Brompton.

Brook-street, W.

[1] THE LANCET, July 12th, 1890, p. 68.

[2] Bulletin et Mémoire de la Société de Chirurgie de Paris.

[3] Brit. Med. Jour., Dec. 8th, 1900, p. 1635.

THE INFLUENCE EXERTED BY AIR UPON THE EXHIBITION OF ANÆSTHETICS.

BY GEORGE FLUX, M.D. BRUX., L.R.C.P. LOND., M.R.C.S. ENG., L.S.A.,

ANÆSTHETIST TO THE BRITISH LYING-IN HOSPITAL; CLINICAL ASSISTANT TO THE ANÆSTHETIST AT KING'S COLLEGE HOSPITAL; ASSISTANT ANÆSTHETIST TO THE DENTAL HOSPITAL OF LONDON.

AIR governs the administration of anæsthetics, by it the patient is enabled to live while he inhales the anæsthetic, and by its instrumentality the dose of the anæsthetic is determined. No manner of administration that involves the curtailment of a patient's air-supply or that fails to direct the course traversed by the air on its way to a patient can ensure either accuracy of execution or limitation of results. Any patient can be reduced to silence and the stillness necessary for surgical procedure with facile certainty, and for that matter frequently is so reduced, by the least practised of administrators. Unfortunately, the power to force a patient to inhale an anæsthetic vapour is not always associated with the practised knowledge requisite to regulate it, and the patient suffers in consequence; not only does he incur the risk of being semi-asphyxiated or totally asphyxiated, but the risk of receiving an excess of anæsthetic and, if he survives, of being grievously sick for hours.

An enormous amount of literature has been produced from time to time dealing with the very important question as to what should or should not be considered the correct dose of any particular anæsthetic. Physiologists and others have told us the effects produced upon the human body as a whole, and upon different portions of it in particular, by the presence of ascertained proportions of anæsthetics. Probably no one will deny that all patients are dissimilar, that the conditions of every operation differ, that the methods of administration differ, that each administrator employing any particular variety of so-called method does so in a manner peculiar to himself, that practically the only constant factors present at an administration are the anæsthetic and the air, and that unless these two essential factors are under absolute and minute control no hope can ever be entertained that reliability of results will be secured or the true merits of the

different anæsthetics established. A uniform dose of any particular anæsthetic is no more likely to fit every patient than is a uniform size of boot, but that is no reason why the means employed to deliver the different anæsthetics in the form of vapour should not act with uniform precision, however much it may be desirable to control and vary their rate of action. It can hardly be contended, for instance, that pouring liquid ether on to a sponge, as with Ormsby's inhaler, or A.C.E. mixture on to a sponge contained in a Rendle's mask, or chloroform on to a towel or "piece" of lint, are in any degree accurate methods of developing and delivering the vapours of these fluids. Neither can it be contended that the quantity of vapour produced by evaporation and inhaled by the patient are under anything like an exact control. The fluid may be poured on to the evaporating surface in successive and carefully measured amounts and the size of the evaporating surface controlled, but the volume of vapour available for the patient at each inspiration cannot fail to be merely conjectural. The supply of vapour is indefinite at all times, it may be increased or diminished knowingly or unwittingly, but the variations that do occur are variations of unequal and undetermined increments.

It is not my intention to suggest that the allowance of anæsthetic vapour for each successive breath that a patient draws during an administration should be separately made the subject of an abstruse mathematical calculation and intricate fractional measurement, as that would be manifestly impracticable, but I do suggest the propriety of employing methods of administration which shall not curtail a patient's air-supply and that shall be capable of intentional variation but incapable of indefinite action. It is highly desirable that an administrator of an anæsthetic should be able to be conscious of the exact value of any variations that he may find it advisable to make during an administration, but it is not essential that he should think in figures if his arrangements are such that "more" or "less" means more or less of a definite substance. The sailor who "takes a pull" at the main sheet or "eases it off," as the case may be, does not use a foot rule every time he either gives more or less sheet, but the sheet is the same in length and strength throughout the voyage.

I have said above that air governs the administration of anæsthetics. The fact that it does so may not be apparent at first sight (I refer here to chloroform and its mixtures, to ether, and to nitrous oxide gas) and I will endeavour to show how important a part the air plays in the process. No patient can live long without air. No patient can tolerate without injury, or at least discomfort, any deprivation of his natural air-supply. No anæsthetic can be continuously given in the absence of air. The presence of air is essential to enable the anæsthetic to be efficiently employed. Nitrous oxide gas administration well illustrates this; this gas cannot be given without air (or oxygen) for a period longer than it takes for a patient to become asphyxiated; the same holds good with ether and with chloroform; in the case of chloroform, poisoning would probably occur as soon as, or sooner than, asphyxia. The dose inhaled of each of the above-mentioned anæsthetics is regulated by the air-supply. Air cannot be withheld during an administration without simultaneously compelling the patient to breathe an atmosphere of pure and undiluted anæsthetic vapour. Air cannot during an administration reach a patient without conveying anæsthetic vapour—the air conveys the dose; the dose conveyed depends upon the amount of anæsthetic vapour taken up by the air *en route*. The opportunity the air has of taking up vapour depends upon the route that the air has taken; if it has passed over or under the evaporating surface it will contain vapour in proportion to the size of the evaporating area, but if it passes through the evaporating substance it will be saturated with anæsthetic vapour.

Take, for example, the method by which chloroform is administered from a folded towel, a Skinner's frame, or a piece of lint. When held over, but not touching, a patient's face the air entering from below and all round the facepiece takes up and conveys an amount of vapour proportionate to the rate of evaporation and the size of the free evaporating surface. This can in a loose way be depended upon to be more or less uniform. If from any cause the mask is permitted to descend and adapt its margins to the surface of the patient's face the air passes through instead of under the evaporating area, and the whole mass of inhaled air becomes instantly charged to saturation with chloroform, an atmosphere that no living thing can withstand for more than a few seconds, as has frequently been demonstrated on the human subject. When a Rendle's perforated mask, packed with a sponge or other absorbent substance, is employed for giving chloroform mixed with other volatile substances the air regulates the dose in a precisely similar manner, the entering air either picking up vapour given off from the evaporating surface in varying but unknown proportions or becoming saturated with vapour if drawn through the moistened absorbent material. However, as the margins of the inhaler where in contact with the face are hard and cannot therefore fit accurately it seldom happens that all the indrawn air has the opportunity of becoming saturated unless the ingress of the air between the inhaler and the face is deliberately prevented by the administrator; fortunately this is a matter of some difficulty and one requiring time to accomplish. Most of these mixtures owe their fictitious safety rather to the part played by the air than to their composition. It has not been shown in the case of any one of them that the chloroform contained in them is less readily absorbed when inhaled, or when absorbed less potent. Were it so the utility of the chloroform in the mixture would not be obvious.

In order to ensure that the amount of anæsthetic vapour inhaled by a patient at any particular breath is the same as the administrator hopes it to be, it is necessary to employ a system of developing and of conveying vapour which shall not be liable to dangerous or spontaneous vagaries. In such a system it is desirable to work through the agency of some one instrument the action of which is constant. That instrument, fortunately, is invariably present—namely, the air. Air can only take up and convey at atmospheric pressure and at any given temperature and pressure (conditions that do not appreciably vary during any given administration) a definite maximum amount of any particular anæsthetic vapour, so that by controlling the amount of inspired air that is permitted to influence the supply of anæsthetic vapour the proportion of anæsthetic present in the air at each inspiration can be gently and evenly raised or lowered as occasion requires.

As I said before, it is the air which ultimately determines the amount of anæsthetic inhaled, but—and herein lies the difference between the methods usually employed and the system which I now advocate—in the former the air is excluded from, or admitted to, the patient without regard to the influence exerted by the air upon the magnitude of the dose of the anæsthetic employed; in the latter the air is not excluded from the patient, and its natural properties are purposely employed to govern and limit the output of anæsthetic vapour, and the anæsthetist manages the anæsthetic by means of the air rather than in defiance of it. Until it is recognised that during the administration of any anæsthetic every alteration that occurs to a patient's air-supply produces simultaneous alteration in the dose of anæsthetic inhaled the dangers that arise from unsuspected variations are likely to continue. He who administers an anæsthetic has two widely differing tasks to perform. Firstly, he has to exercise his judgment both as to the limited effects he wishes to produce upon the patient by the anæsthetic and as to the variations in dosage requisite to keep his patient in a satisfactory condition; and secondly, he has to act up to his judgment, and, therefore, unless he is in a position to dispense his anæsthetic vapour with accuracy his performance must of necessity be uncertain. The dangers that do arise from unsuspected or uncontrolled variations are not rendered less frequent by the very prevalent custom of regulating the dose according to the effects produced (in contra-distinction to regulating the effects by the dose). This custom has, especially when the equipment which is employed to exhibit the anæsthetic vapour is in the least degree indefinite in its action, the great drawback that very undesirable effects are liable to be established prior to their becoming apparent to the administrator whose subsequent efforts to regulate his dose may be too late. There is another drawback to this custom—namely, that unpractised administrators are prone to give their patients the most that they can stand short of their exhibiting actual symptoms of poisoning, rather than to restrict their administration to the limits of efficiency—a proceeding requiring the exercise of considerably greater judgment.

The system of administering anæsthetics by means of the air is simple and has the advantage that it is equally

applicable to all anæsthetics. It consists, not in attempting to control the output of vapour by varying the copiousness of the source of supply, which under this system is a matter of indifference, but in regulating the amount of fresh air that is permitted to take up fresh anæsthetic vapour at each inspiration, this amount being, although definite in composition, variable in quantity at discretion, and it becomes added to the fresh air which completes the inspiratory volume. The essential points in respect of the equipment employed for utilising this system are that it should be absolutely incapable of spontaneous alteration in either shape or condition—of being varied in action by the patient—or of automatic action. Specially constructed apparatus is not necessary when these conditions are present. I should like to emphasise the fact that administration by means of air is only a system for providing a patient with the vapour in a definite manner; the amount administered must, as in the case of all therapeutic agents, be a question entirely of judgment; but of one thing I am certain, and that is that the system cannot, until nature changes the property of air, play its employer false. Personally I use, when carrying out this system in its entirety, apparatus of my own devising—namely, an inhaler for chloroform, an open apparatus for nitrous oxide gas, a special form of stopcock for use with nitrous oxide or for use when employing Clover's ether inhaler, whether with or without gas. These were made originally for me by Mr. J. H. Montague of 101, New Bond-street, W.

Old Burlington-street, W.

THREE CASES OF ACUTE ASCENDING PARALYSIS.

BY T. A. GREEN, M.D. EDIN.

ACUTE ascending paralysis is a condition of great interest, not only because of its comparative rarity, but also on account of the very diverse opinions which have been held as to its causation. The first published cases of the disease (10 in number) were contributed by Landry in 1859—hence it often goes by the name of Landry's paralysis; and since then many other examples of the disease have been continuously put on record. The most extensive contribution to the literature of the disease in this country was made by the late Professor James Ross of Manchester who, in 1889, in a series of articles on "Peripheral Neuritis" collected and discussed 93 cases in the *Medical Chronicle*, vols. x. and xi. In February, 1896, a paper on "Idiopathic Acute Ascending Paralysis," by Dr. Reynolds, appeared in the same journal, and several cases have been narrated in the various medical magazines. It has been my fortune to see three cases of the disease in my own practice and to these I am able to add a fourth—a most interesting case—which occurred in the practice of a friend. I propose to give an account of three of these cases and I trust at some future time to be able to discuss the condition in order to bring out some points which I think worthy of note. In order to do this I shall take full advantage of the series of cases collected by Ross which will be found in tabulated form in vol. x. of the *Medical Chronicle*, p. 358. A somewhat different explanation of the disease to that advocated by Ross can, I think, be given.

My cases are as follows.

CASE 1.—The patient was an unmarried girl, aged 19 years, living at home with her parents. Her father and mother were alive. The father suffered from chronic bronchitis. The brothers and the sister of the patient were healthy; one aunt had had "swelling in the neck and went off in a decline." Until two and a half years previously there was nothing of importance—no rheumatism or syphilis. For two and a half years she had suffered from Graves's disease in which all the usual symptoms of that condition had been displayed. During this time her menstrual periods became irregular and finally they ceased five months before the present illness. Subsequently to their cessation, however, she had suffered from periodical attacks of epistaxis. On June 30th, 1894, the patient came to consult me and complained of general weakness, severe headache, sickness, and constipation; in addition she was suffering from one of her attacks of epistaxis. On inquiry I found that she had been under treatment at the local infirmary for some months for her "goitre." This had been progressing favourably and on her last visit there (June 21st), nine days previously, she was very much better. Hurrying off to the station, however, she missed her train and received a severe chill and had felt ill ever since.

On examination the symptoms of goitre were well marked. The heart was enlarged and there was a systolic murmur at the base. In the lungs there was chronic bronchitis with purulent sputum but no consolidation. On July 4th I was called in to see the patient and I found that the general weakness was increasing, especially in the lower limbs. She was sitting in a chair, but was quite unable to stand or to walk by herself. Epistaxis still continued at intervals, as did also the sickness. She complained of violent pains striking from each side of the neck down into the shoulders and the arms, worse on the left side. Vision was good; the pupils were equally dilated and reacted to light. The pulse was 120 and weak and the temperature was 99° F. The sickness and epistaxis gradually became relieved, but the muscular weakness still progressed and attacked the upper limbs—first the muscles of the shoulder and the upper arms, then the muscles of the forearm—and she was obliged to take to her bed. On July 7th the neuralgic pains returned at intervals and on this day the patient had a sharp attack of palpitation and dyspnœa which lasted about 10 minutes and then passed off, leaving her in a very exhausted condition. She also complained that her eyesight had gone and the eyeballs seemed more prominent. On the next morning (July 8th) I found that she had passed a very restless night with delirium and was in a very exhausted state. The lower limbs were completely paralysed and she was lying propped up in bed. The upper arms were quite helpless, but she could with difficulty raise the forearms off the bed. The grasp of the hand was very feeble. Sensation was unimpaired, superficial reflexes could be elicited, but ankle-clonus and knee-jerk were absent; there was no wasting of the muscles. Her eyesight had improved, but from this time her power of vision varied from day to day. Attacks of dyspnœa came on three or four times a day. From this time she continued to get weaker; the muscles of the trunk became gradually paralysed and by July 15th she could only swallow liquid nourishment with difficulty. Her tongue became dry and brown and sordes began to collect on the teeth. Delirium was now almost constant. On the night of the 15th she complained of pain in the chest and her temperature was 100°. Next morning I found that she had had a very bad night, with restlessness, pain in the chest, and attacks of dyspnœa. Her breathing was difficult and on auscultation the action of the heart was found to be very laboured and galloping. The temperature was 101°. She gradually became worse and died at 11.30 A.M. from paralysis of respiration. The sphincters acted normally until just before death when there was some incontinence of urine. There was no post-mortem examination.

CASE 2.—Dr. J. Scott Taggart, who was assisting me at the time, greatly helped with the notes of this case. The patient previously to this illness had been a strong, healthy man. His age was 23 years and he was married and had one child. He was a quarryman by occupation, was well known as a football player, and was a very temperate man. His previous illnesses had been restricted to obstinate constipation and slight accidents at football. One of the latter had happened four months before the present illness, when he received a kick on one shin, and a troublesome little ulcer, deeply injected and never larger than a shilling, formed and did not heal for five or six weeks. On May 20th, 1895, he was quite well, but on the following morning he began to suffer from pain in the calves of the legs. These pains became so severe that he gave up work at noon and then the pains extended through his legs and back. On the next day (May 22nd) he was worse and he sent for me. He now complained of pain in his head (both back and front), in his back, and in the muscles of his thighs and legs.

On examination the tongue was found to be coated with thick white fur, the mouth was sore inside, the teeth were bad especially on the left side, and his appetite was bad. The heart and lungs were sound. The temperature was normal and the pulse was 60 per minute. There were slight redness of the conjunctiva and watering of the eyes. The pupils reacted to light and accommodation. There was

no numbness or disturbance of ordinary sensation and no paralysis or paresis. The painful parts were not tender to pressure. On the 23rd the pain had left the back and was localised in the back of the thighs and in the calves. The temperature was normal and the pulse was 60. The eyes were still injected, but there was no pain or photophobia. A herpetic eruption had appeared on the lips, the mouth was still sore, and the tongue was furred. On the 24th the patient was quite free from pain and headache. The temperature was normal and the pulse was 60. He however complained of sleeplessness. He got up at noon and dressed, but felt so weak that in two or three hours he went back to bed. The appetite was improved. On the 25th the patient was in bed, suffering no pain but feeling very weak. He could move his legs and toes, also his arms and hands, and his grasp was fairly good—a little stronger on the right than on the left side. He was unable to stand alone and complained of numbness in his hands and feet. He could distinguish between the head and point of a pin all over his upper and lower extremities. He was perspiring freely. On the 27th I found the patient very weak but his appetite was good. He was lying on his back and was unable to raise his lower extremities from the bed though the contraction of the muscles could be seen and felt. He could slightly move his foot, but not his toes. The muscles of the thigh were much more powerful than were those below the knee; no tendon or skin reflexes could be elicited on either side in the lower extremities. The upper limbs were very weak. He could only just move his fingers; he could close his hand but his grasp was extremely feeble (practically absent). The muscles moving the wrist were a little stronger; the muscles of the arms were fairly strong and those of the shoulder and neck were in good condition. The sphincters were normal; perspiration was still profuse. On the 28th the patient was much the same as on the previous day but had developed facial paralysis on the left side. He said that his mouth became drawn on the afternoon of the previous day. He had had a sleepless night; the pulse and the breathing were good. The temperature was 99° F. He was rather troubled with some thick sticky mucus in his throat, which was with difficulty coughed up. On the 29th at 1.30 A.M. the patient was taken suddenly worse. He became delirious and slightly cyanosed. The temperature was 99·4° and the pulse was 114. He perspired freely and was troubled with the mucus in his throat, which, however, was not large in quantity. His delusions during his delirium seemed to have some connexion with his paralysis, seeing that he called upon his friends to save him from sinking through the bed or to deliver him from people who were tying him down or who were suffocating him. Under treatment he rallied and two hours afterwards he went to sleep. He was seen again at 10.30 A.M. and had then had three or four hours' sleep. He had had a good breakfast. His limbs were quite powerless. The pulse was 110 and full. The diaphragm was paralysed and the breathing was intercostal in type. There was slight cyanosis and the mucus in the throat was still troubling him. At 3.30 P.M. he was again taken suddenly worse and in spite of all treatment he did not improve. He became extremely cyanosed and quite wet with perspiration. The pulse was 110, full and regular, and the respirations were 30 per minute. There was a large quantity of thick tenacious mucus in his throat and his extremely weak efforts to get it up exhausted him very much; its removal afforded temporary relief, but it soon accumulated again. The cyanosis gradually increased, then came failure of respiration, and finally failure of the pulse and death at about 4 P.M. Unfortunately I was unable to get a post-mortem examination and there were no electrical tests.

CASE 3.—The patient was a male child, aged three years and 10 months. There was no particular family or personal history. On June 2nd, 1900, I was sent for to see the child and found him suffering from a mild though undoubted attack of diphtheria. The membrane was confined to both tonsils and the upper pharynx and did not spread to the larynx. The case was not a severe one and the temperature was never above 101° F. There was little swelling of the glands of the neck. Antitoxin was not used. The throat was swabbed out twice daily with antiseptics—at first with a solution of izal (1 in 50) and later with carbolic glycerine—and by June 13th to all appearances the throat was in a normal condition. On the 16th difficulty of swallowing supervened with paralysis of the muscles of the soft palate and regurgitation of fluids through the nose. There were also weakness of the lower limbs and inability to stand without assistance. The upper limbs, however, were fairly good; sensation was normal and there was no active wasting of the muscles. Liquor strychniæ hydrochloratis in one-minim doses was administered every four hours, but the child showed no signs of improvement. He continued in this state until July 3rd when it was noticed that the head was drawn to the right side from paralysis of the muscles of the left side of the neck. There were also "rattling" in the throat and increased difficulty of swallowing from paralysis of the lower pharyngeal muscles. On the 7th there was marked increase of paralysis of all the muscles of the body. The child was lying on his back and it was with difficulty that he moved either legs or arms. The head was not so much drawn to the right side owing to commencing paralysis of the muscles of the right side of the neck. On the 10th the breathing had become costal in type. There were paralysis of the diaphragm, complete paralysis of the lower limbs, and only very slight movement in the upper limbs. The knee-jerk and the superficial reflexes had disappeared. The eye reflexes were normal and the child was conscious until he died in the afternoon from failure of respiration. After June 13th the temperature continued normal and there was no active wasting of muscles all through the illness. Sensation was normal and there was no incontinence of urine or fæces.

Meltham.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

LARYNGEAL DIPHTHERIA (?).

BY A. DE WINTER BAKER, M.R.C.S. ENG., L.R.C.P. LOND.

THE fatal case of laryngeal diphtheria reported by Dr. G. J. Maguire in THE LANCET of March 23rd, p. 854, induces me to send you a short note of a case which has recently occurred in my practice.

The patient was a boy, four years of age, of a highly nervous and excitable temperament, whom I had attended about a year before for a bad cold and slight enlargement of the tonsils. On the present occasion I was called to him one evening and found him suffering from a croupy cough. The tonsils and fauces were slightly red and inflamed, but there was nothing like any membrane to be seen, and his temperature was only 99° F., so that, judging from his former illness and bearing in mind that he had some chronic enlargement of the tonsils, I believed the case to be one of simple catarrh about the glottis and told the friends that they might hope for a speedy improvement from the use of suitable remedial measures. On visiting the patient on the next morning I found him up and dressed the croupy sound having quite gone and the temperature being normal, and he was altogether so much better that I did not intend to visit him again until the day after next. However, in the evening of the same day I was again sent for and I found him with stridulous breathing and general signs of obstruction of the larynx. The temperature was only 99°. No membrane could be seen on the fauces or tonsils, and as it was exceedingly difficult to get a view of the throat owing to the refractoriness of the patient I judged it wiser not to introduce a swab for bacteriological examination as I should have liked to do. On the same evening Dr. C. J. Harrison saw him in consultation with me, and we decided to inject anti-diphtheritic serum. However, owing to the syringe breaking this was not done at the time. On the next morning the breathing was better, but the temperature rose steadily through the day, reaching 103° in the afternoon, when it began to fall again, and it was 100° at night. There were harsh râles over both lungs. A fresh syringe having been procured 2000 units of serum were injected at night in spite of the patient being evidently easier and better. On the next morning the temperature had fallen to 99° and the patient was better in every way, and from that time he made an uninterrupted recovery.

Whether this was a case of diphtheria or not and whether

the improvement was due to the serum injection I am unable to say positively. No membrane was coughed up or seen at any time. Doubtless, as Dr. Maguire says, there are cases of mild diphtheria that are not recognised, but the lesson to be learned from these mild cases is the value of serum injection. As far as I am aware it does no harm, and I shall certainly resort to it again in any doubtful case. I think it is possible that had it been used in Dr. Maguire's case the result would have been different.

Northumberland-avenue, W.C.

CARCINOMA OF THE PROLAPSED UTERUS.

BY HERBERT SNOW, M.D. LOND.,
SENIOR ACTING SURGEON TO THE CANCER HOSPITAL, BROMPTON.

A WOMAN, aged 73 years, the wife of an agricultural labourer, was admitted to the Cancer Hospital, Brompton, on Jan. 16th, 1901, with carcinoma of the prolapsed uterus. There was no family history of cancer. The uterus had become procident at the climacteric period—i.e., about 28 years previously—and she gravely stated that this had been brought on by her husband rubbing her back for the common lumbar pains. She had since gone about as usual, wearing only a diaper, and no pessary or other support had ever been resorted to. The cancerous development (cervical) was said to have commenced a year before. As the duration of malignant disease in the female is almost invariably much understated, one of about twice that length was inferred from the objective phenomena. Above the growth was a considerable margin of healthy vaginal mucosa. The parts were freely mobile. Unfortunately, however, there were signs of extensive implication of the bladder. The urine was copiously laden with pus and albumin. The patient was very senile and hence the idea of operative removal had to be abandoned. She had pain on micturition but at no other time, and while she was kept in bed she had no suffering whatever. She still remains in hospital.

Carcinoma, cervical or otherwise, of the procident uterus seems to be a singularly rare event; whereas it might have been expected to be common, from the exposure to friction. I have not met with a case before, nor have any of my medical friends to whom this has been mentioned. Presumably the rational explanation is that the existence of the disability induces care of the exposed parts with concomitant cleanliness and health. Ordinarily, too, a pessary is worn. The disease in this case seems to be a result of the neglect of all such precautions.

Gloucester-place, Portman-square, W.

A MODIFICATION OF THE ROMANOWSKI-RUGE METHOD OF STAINING THE PLASMODIUM OF MALARIA AND OTHER PROTOZOA.

BY W. HANNA, M.B. R.U.I., D.P.H. CANTAB.

THE following account of a modification of Romanowski's method will be found in the *Russian Archives of Pathology, Clinical Medicine, and Bacteriology*, vol. I., part 4, where DR. N. BERESTNEFF describes an exceedingly convenient and rapid method of staining malaria plasmodia. It has been used with great success in this laboratory and deserves to be widely known in scientific institutions in England. The following is the method of preparation. A 1 per cent. aqueous solution of methylene blue (med. puriss. Höchst) containing 0·3 per cent. of carbonate of soda, is heated for three hours on a water bath and filtered. One cubic centimetre of this solution is mixed with 1·5 cubic centimetres of a 1 per cent. aqueous solution of methylene blue and to this mixture are added five cubic centimetres of a 1 per cent. aqueous solution of eosine (extra BA Höchst). Old preparations of semilunar bodies and halteridium Danielewskii ought to be stained in this mixture for from 15 to 20 hours at laboratory temperature. For young forms it is sufficient to stain for from 15 to 20 minutes without heat, followed by gentle heating for from 15 to 20 minutes until steam rises. To decolourise the red cells, which are blue after this staining, the preparation is put for from two to five seconds in the following mixture:—10 cubic centimetres of methylene blue, one per cent., 200 cubic centimetres of distilled water, and 0·25 cubic centimetre of acetic acid. The preparations are washed in water and dried with blotting-paper, and they are then dipped for from five to 20 seconds in absolute alcohol to dissolve off any residual stain and finally washed in water. Fresh preparations of blood containing plasmodia fixed with absolute alcohol are stained in this mixture diluted with from two to four volumes of water for five minutes without heat, followed by gentle heating for from five to 10 minutes. Blood containing trypanosoma and slides of the intestinal contents of guinea-pigs having trichomonas fixed with absolute alcohol or sublimate, are stained with this mixture undiluted or diluted with two volumes of water, as for plasmodia. The flagella are stained a violet-red and it may be seen (in trypanosoma) that they have a nucleus; the same may be said regarding trichomonas. The chromatin of plasmodia and the other protozoa in question is stained by this method a bright red violet, the protoplasm blue, the leucocytic nuclei and BIZZOZERO's plates like the chromatin of the protozoa, neutrophile granules are rose, eosinophilous cells are purple, whilst the red corpuscles are of a delicate rose colour. Dr. Berestneff working in Bombay has informed us that he has slightly modified the above for tropical climates. He adds the stains in the following order and well mixed: Soda methylene blue 1 per cent. diluted with equal parts of water, 0·5 cubic centimetre; methylene blue 1 per cent. diluted with equal parts of water, 1·5 cubic centimetres; and eosine 1 in 2000, 5·0 cubic centimetres. He informs us that the best results are obtained with fresh preparations of halteridium and malaria by at once floating the dish containing the mixture and preparations for from five to 10 minutes upon the surface of water raised to 55° C. The above method has been tried here with excellent results.

Government Research Laboratory, Bombay.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ST. GEORGE'S HOSPITAL.

A CASE OF FRACTURE DISLOCATION OF THE CERVICAL SPINE COMPLICATED BY FRACTURE OF THE SKULL.

(Under the care of Mr. W. H. BENNETT.)

THE value of traction in replacing dislocation of the cervical spine is sometimes very marked, for often the displaced vertebra gives rise to paralysis merely by pressure, the tough dura mater saving the cord from laceration. The slowness of return of movement and sensation after removal of the pressure is probably to be attributed to the presence of œdema at the injured spot. A little blood also may have been extravasated and some hours or days may elapse before this can be absorbed. The unfortunate cerebral complication in the following case prevented a recovery which the skill of the treatment deserved. More than 18 hours elapsed between the occurrence of the injury and the onset of the coma. This is an exceptionally long interval of consciousness in a case of meningeal hæmorrhage, for the coma usually comes on within an hour or two. For the notes of the case we are indebted to Mr. P. L. Mummery, F.R.C.S. Eng., house surgeon.

A plumber's assistant, aged 25 years, was taken into St. George's Hospital at 6.30 P.M. on Jan. 16th, 1901, having just fallen from the roof of a house (a distance of about 30 feet) on to a grass lawn. He was said to have been quite conscious when he was picked up after the accident. On admission he described the accident and complained of pain in the neck and jaw. His head was turned towards the left side with the chin pointing forwards and was fixed in that position; on examining the cervical spine some displacement of the sixth spine could be felt. There were complete paralysis and loss of sensation below the

level of the second rib, with loss of sensation and paralysis of both arms. Respiration was entirely diaphragmatic. The knee-jerks were absent, but the plantar reflex was well marked. There was priapism. On the left side of the face there was a deep depression about three inches long over the malar bone and involving the left orbit, the whole surface of which was severely burnt, this being due to his having fallen on to a hot soldering-iron which was in his hand at the time of the accident. A diagnosis of dislocation with pressure on the cord at the level of the sixth cervical vertebra was made, and it was decided to make an immediate attempt to reduce it.

The patient having been placed flat on his back traction was made by pulling on the lower jaw and occiput, counter extension being maintained from the ankles by an assistant while another assistant fixed the shoulders. After pulling for some time something was felt to slip with a distinct click, followed immediately by relief of pain and free mobility of the head. No anæsthetic was administered, and the patient did not complain of pain during manipulation. At 8 P.M. he could move both arms and sensation in them had returned; he was quite comfortable and slept for some hours. At 6 A.M. on Jan. 17th he vomited at intervals for two hours. His abdomen was distended and his breathing was very laboured in consequence. Two large enemata of olive oil were given to clear the rectum of hardened fæces, the long rectal tube was then passed, and manual pressure was made on the abdomen. In this way a large quantity of flatus was expressed and the distension was relieved. An injection of morphia (one-third of a grain) was administered and was followed by marked improvement in the breathing and cessation of vomiting. At 10 A.M. he was much better; the paraplegia and loss of sensation, however, remained the same. The knee-jerks were still absent; some twitching of the legs and left hand was noticed. At about 1 P.M. he began to get rather drowsy and his temperature rose to 103° F. The right pupil was noticed to be rather small; the left, owing to the burn, could not be seen. Priapism had disappeared. At 4 P.M. he was conscious but very drowsy. He gradually became more drowsy and his breathing stertorous; at 7 P.M. he died.

Necropsy.—At the post-mortem examination an extensive fissured fracture of the vault and base of the skull was found, with a large blood-clot due to rupture of the left middle meningeal artery pressing on the left cerebral cortex. On examining the spine it was found that the body of the sixth vertebra was fractured and there was evidence of a recent dislocation at this level. There was no displacement of the spine at the time of the examination and the cord itself appeared to be uninjured. There was no hæmorrhage either between the membranes or in the cord itself. All the other organs were normal.

Remarks by Mr. MUMMERY.—From the necropsy it is obvious that the patient died from compression of the brain and not from the spinal injury, though it was impossible to diagnose the compression during life owing to the other injuries. If it had not been for the head injury it seems probable that complete recovery would have followed, as there was no gross lesion of the cord and all pressure had been relieved by the reduction of the dislocation. A point of interest in this case was the amount of force necessary to reduce the dislocation—the force required was very considerable. The case also shows that immediate recovery from paralysis must not be expected after reduction of the deformity. The spinal cord seems to require a certain time to recover after being subjected to pressure. This is even more noticeable in those cases in which laminectomy is done for the relief of pressure, complete recovery sometimes following weeks or even months after the operation. One of the most difficult things in treating these cases is to prevent distension of the abdomen. The most effective means appears to be the use of the long tube and pressure on the abdomen combined with the use of oil enemas.

STANLEY HOSPITAL, LIVERPOOL.

A CASE OF COMA FROM THE APPLICATION OF CARBOLIC COMPRESSES TO THE UNBROKEN SKIN.

(Under the care of Mr. D. DOUGLAS-CRAWFORD.)

CARBOLIC acid is absorbed freely by the unbroken skin and in most cases merely darkening of the urine occurs, but if the area to which the drug is applied be large, or the solution strong, severe symptoms are very liable to follow. Coma, with great acceleration of pulse and respiration, is not very rarely observed, and it may lead to a fatal issue, but if the cause of the coma is recognised, and the application is discontinued, recovery nearly always ensues. A case has been recorded,[1] where in error "pure carbolic acid" was used instead of carbolic oil for cleansing the scalp of a child. Within five minutes consciousness was lost and the child remained comatose for five hours. In this case the rapid onset of symptoms was due to the great strength of the application. Litton-Forbes in 1880[2] drew attention to coma as a result of carbolic acid dressings. At the present time antiseptic dressings containing carbolic acid are much less frequently employed than they were in the early days of antiseptic surgery and therefore these untoward results are less frequently noticed, consequently it is important that cases like the following should be recorded, for the dependence of the coma on the carbolic acid applications might fail to be recognised. For the notes of the case we are indebted to Dr. R. G. Henderson, late senior house surgeon.

A girl, aged four years, was admitted into the Stanley Hospital, Liverpool, under the care of Mr. Douglas-Crawford, on Sept. 8th, 1899, suffering from severe double genu valgum. She was a well-grown child with thin delicate skin, was somewhat poorly nourished, and was of a rather nervous disposition. On the 13th it was proposed to perform Macewen's osteotomy on both legs. At 6 A.M. compresses of carbolic lotion (1 in 40) were applied to both legs, reaching from above the ankle to about the middle of the thigh. At 10 A.M. these were removed, the child had a bath, and the legs were scrubbed with oil of turpentine. At about 10.50 A.M. compresses of the same strength were reapplied. At 11 A.M. the child was apparently quite well and had some milk to drink. At 11.30 A.M. Dr. Henderson visited the patient with the object of fitting suitable splints for use after the operation. The child was then asleep. She was turned on to one side while the splints were being fitted, but during the manipulation she did not wake up. It was observed that she looked rather pale and that the limbs were somewhat limp, but Dr. Henderson regarded her at the time as enjoying a very sound sleep and did not allow her to be awakened. At 1.30 P.M. he sent for the patient to be taken down to the theatre and was then informed that the child looked very ill and could not be awakened. He found that the patient was almost completely comatose, but on sharp stimulation, as by pinching or rubbing the ribs with the knuckle, she would respond slightly by raising the arms or turning the head. The skin was ghastly pale, cold, and clammy. There was marked muscular relaxation, the limbs dropping quite limp when lifted. The knee-jerks were absent. On touching the cornea there was a very slight response of the lids. The pupils were normal in size or slightly dilated, equal, and reacted well to light. The lids were not quite closed and were subject to a slight spasmodic winking movement. The temperature could not be got in the axilla, the mercury refusing to rise but in the rectum 98·6° F. were registered. The pulse ranged from 170 to 180 and was small, but at this time it was quite countable at the wrist. The heart-sounds were clear and nothing abnormal was noted. The position of the apex-beat was not definitely localised. The respirations numbered 36 per minute and were deep and regular, but there was no stertor. At 2 P.M. the child was in practically the same condition except that the pulse was running at 180 or more and could not be distinctly counted at the wrist. Dr. Henderson was at first much puzzled as to the cause of these symptoms. The urine had been examined in the morning and found to be normal. The heart and lungs were normal, and the child had had nothing to eat or to drink for hours. It then occurred to him that the carbolic dressings might be the cause. These were at once removed and the legs were well washed. A specimen of urine which was drawn off by the catheter was of a light-greenish colour and of specific gravity 1022 and contained no albumin or sugar. Brandy was administered, hot bottles were applied, and a dose of the hospital white mixture (magnes. sulph. and carb. with peppermint water) was given. At 2.45 P.M. the pulse was rather worse, being hardly perceptible at the wrist; the coma was, however, somewhat less profound. The patient

[1] THE LANCET, March 2nd, 1895, p. 543.
[2] London Medical Record, 1880, p. 173.

would open her eyes widely if sharply stimulated. Brandy and white mixture were again given. At 4.15 P.M. she vomited, bringing up the white mixture that had been taken previously. At 4.40 P.M. the pulse was better (142), muscular tone was returning, and she was more conscious. The pupils were more dilated and reacted as before. At 6 P.M. the pulse had fallen to 120. The respirations were 32. She had been perspiring a great deal. At 7.15 P.M. she passed spontaneously five ounces of urine which was green in colour, darker than the first specimen, of specific gravity 1047, and contained no albumin or sugar. At 10 P.M. the temperature was 97° in the axilla, the pulse was 130, and the respirations were 24. An hour later she passed four and a half ounces of urine similar to the last specimen, but the specific gravity was only 1025. On the following morning it was reported that the patient had slept well and had taken milk well. She now seemed to be all right except for some pallor and rapidity of the pulse. These symptoms improved in the next few days, during which time the urine continued to show a gradually diminishing excretion of carbolic acid.

Remarks by Dr. HENDERSON.—The occurrence of coma from the application of carbolic dressings to the skin prior to operation must be extremely rare if we are to judge from the few cases that have been recorded and when we think of the great number of surgical operation cases that are so prepared. I consider, therefore, that the above case is worthy of record. In regard to the sequence of events in this case it is to be observed that the 1 in 40 carbolic compresses had been applied for four hours without producing any symptom, that the limbs were then scrubbed with turpentine and the compresses were re-applied, and that 40 minutes later the child was found in an unnaturally deep sleep which continued for two hours, when she was found in the state of collapse and coma described. It seems to me, therefore, that the absorption took place chiefly from the second compress and that the cleansing by oil of turpentine assisted the process partly no doubt from clearing the pores of the skin from fatty matter and probably also from acting as a solvent and vehicle for the carbolic poison. The skin of both legs was absolutely unbroken and when the compresses were removed there was no sign of irritation such as one frequently sees from the use of stronger lotions of 1 in 20. Other points to be noted are that vomiting occurred only once, and that when the patient was coming round and that there was no rise of the temperature above the normal.

I have been able to find records of only three cases similar to the above. Mr. Clement Lucas and Mr. Arbuthnot Lane record two cases occurring at Guy's Hospital[1] and Mr. Lucas reports a second case.[2] Mr. Lucas's first case was that of a boy, aged 15 years, who was the subject of old bone disease of the hip. There were three small sinuses present. A compress of 1 in 20 carbolic acid was applied at noon. He was very sick in the evening and at 2.20 A.M. was found in a comatose condition, the pulse being 200 per minute and very feeble, the breathing stertorous and perspiration profuse. There was no corneal reflex and the pupils were moderately smaller and reacted to light. The coma gradually passed off, but the patient was stupid all the next day, the temperature rising to 103·4° in the evening. He gradually resumed his normal condition in a few days. An interesting feature about the case was that after his recovery carbolic compresses were re-applied, to be followed by a train of symptoms similar to those before.

Mr. Lane's case occurred in a boy, aged six and a half years, who had a tumour in the right iliac fossa. Here the skin was absolutely unbroken. An hour and 10 minutes after the application of a 1 in 20 compress he was found pale, collapsed, and comatose; the pulse was 130, weak and intermittent; there was marked dyspnœa; the respirations were 72 and the temperature was 97°. Ether, atropine, and brandy were administered. Mr. Lane describes trembling of the limbs and eyelids, as well as the active reaction of the pupil to light, combined with absence of the corneal reflex—features which were well marked in the present case. Gradual improvement took place and six hours from the time symptoms were first noted the child was quite rational, but was sick at intervals for the next 24 hours.

Mr. Lucas's second case was that of a girl, aged five years, with rickety deformity of the tibia. Two hours after the application of a 1 in 20 carbolic compress she was pale and sleepy and about an hour later she was found comatose, though not absolutely so, and with very dull reflexes, clammy sweat, and very rapid feeble pulse. Here the heart was definitely found to be dilated. The conjunctival reflex was not quite lost, the pupils were dilated and almost fixed, becoming contracted later. The patient gradually improved, the coma having passed off in about six hours, leaving her in a stupid condition. There was no rise of the temperature above the normal.

It will be observed that in these three cases the lotion used was the strong 1 in 20. In the present case it was only 1 in 40. In all instances the cardinal symptoms have been alike—pallor and drowsiness (not always observed) leading to coma, with deep or rapid stertorous breathing and an alarmingly rapid and feeble pulse. Profuse perspiration and vomiting were always present. The reflexes were greatly dulled or abolished with the somewhat remarkable exception of the pupil reaction to light, which remains, although the cornea is quite insensitive. Prognosis is good, as in all these cases recovery has ensued in spite of the alarming symptoms. In addition to stimulants and warmth I should, in a case of prolonged coma from this cause, be inclined to try intravenous injection of sterilised sulphate of soda solution. In one case of carbolic poisoning (suicidal) which I have seen this had a remarkable restorative effect.

I have to thank Mr. Douglas-Crawford for his courtesy in permitting me to publish the case.

[1] THE LANCET, June 1st, 1895, p. 1362.
[2] THE LANCET, August 28th, 1897, p. 537.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

The Pathology of Dropsy.—Exhibition of Specimen.

A MEETING of this society was held on April 2nd, Mr. W. WATSON CHEYNE, the President, being in the chair.

The PRESIDENT, in bringing forward certain Alterations in the Rules recommended by the Council, said that after considerable discussion the council had decided to recommend the appointment of four sectional secretaries for the four departments of pathology—viz., (1) pathological anatomy and histology; (2) bacteriology; (3) experimental pathology; and (4) chemical pathology respectively. One senior or general secretary would organise the whole work of the society. There would also be four vice-presidents who would preside over four committees of the council corresponding to these four departments. The necessary alterations to the by-laws of the society to effect these changes were adopted by the meeting.

Professor E. H. STARLING made a communication on the Pathology of Dropsy. He remarked at the onset that he had only been able to perform experiments on healthy normal animals. He had not been able to apply to his hypotheses the only true test—viz., to experiment under diseased conditions. However, dropsy was an abnormal accumulation of normal fluid in the tissues due to a disturbance of the ballance between the production and absorption of fluid in the subcutaneous tissues and serous cavities of the body. He would limit his remarks to the "mechanical" form of dropsy due to simple obstruction, as met with in cases of uncompensated heart disease. The possible factors in the causation of dropsy were very numerous; thus there were some which could act by causing increased transudation and others which could act by causing diminished absorption—factor of diminished absorption negligible compared with product; but in his belief the factor of diminished absorption was negligible as compared with that of increased transudation. The factors involved in lymph production were both chemical and physical. As regards the former, the capillary walls presented no opposition to diffusion and thus there was always a change going on between the fluid within and the fluid without the walls. Wherever there was breaking down of big molecules into smaller and more diffusive molecules then there was increased diffusion. This would explain local inflammatory œdema, but would not explain the enduring or permanent dropsies as met with by the physician. The physical factors influenced filtration through the capillary walls and this depended upon (1) the intra-capillary pressure; and (2) the permeability of the vessel walls. The latter differed in different parts of the body; thus in the viscera the permeability of the vessel walls was much greater than

it was in the limbs. They must differentiate between these two kinds of vessels. Now the fluid in the kind of dropsy under consideration collected in the latter where permeability was most difficult. It had been stated that "mechanical" dropsy was very readily explained by a rise of pressure in the veins and capillaries. But simple obstruction to a vein in an animal did not produce œdema. Rise of pressure alone would not produce œdema, it was necessary to alter the nutrition of the capillary wall—e.g., by lowering the vitality of the latter by tissue fibrinogen and other poisons or by producing hydræmia. If the vitality of the capillary walls was damaged by the injection of tissue fibrinogen or other poison, or by producing hydræmia, œdema resulted. Everything seemed to depend on the state of the capillary walls. It was certainly so as regards mechanical œdema by pressure of a tumour. Cardiac dropsy was a little different. In the first place it was difficult to see how there could be an increase of pressure in the capillaries in cardiac dropsy. He (Professor Starling) had made various experiments, employing Cohnheim's device of injecting oil into the pericardium, which demonstrated that there was actually a fall of blood-pressure in the capillaries in simple cardiac failure. It followed, therefore, that the prime change here was not mechanical but in the capillary walls. Just as in ischæmia, the walls became damaged by deficient nutrition and they were not then able to withstand even the normal blood-pressure. The problems presented by effusions into the serous cavities presented much the same solution as in dropsy of the limbs. He had designed various experiments in order to produce pleural effusion by a rise of capillary pressure but without success. But it was very easy to produce dropsy by the slightest damage to the capillary walls or to the pleural membrane. All these experiments showed that if the vessel walls remained normal no fluid was effused. In the case of the peritoneum, however, it was possible that a rise of pressure took a rather more active part.

Dr. W. S. LAZARUS-BARLOW said he was very glad that Professor Starling had modified his views and had thrown over the idea that mere mechanical pressure could produce dropsy. He (Dr. Lazarus-Barlow) had raised the blood-pressure in the hind limb of a dog from 5 to 60 or 70 mm. of mercury and kept it at that for several hours, but had produced only a negligible quantity of dropsy. Moreover, if the filtration view was correct it ought to be possible to show that the first commencement of the dropsy occurred at the very moment at which the vascular pressure was raised. He had investigated this matter experimentally and had no hesitation in saying that it was possible to increase the venous, and therefore the capillary, pressure very considerably without the slightest evidence that fluid left the blood-vessels or passed into the tissues. For this purpose he made careful examinations of the specific gravity of the blood (arterial and venous), the blood plasma (arterial and venous), the specific gravity of the tissues, muscle, and skin, the specific gravity of the lymph, and the rate of its flow. In spite of a rise in the blood-pressure in the veins of a dog to 50 mm. Hg., the normal being less than 4 mm. Hg., at the end of an hour no alterations in these values for the specific gravities were observed. On the other hand, it was easily possible to produce a dropsical condition of the dog's hind paw by completely arresting the flow of blood through the limb for an hour and then allowing the blood again to flow through the limb. Under such conditions the œdema made its appearance and was accompanied by the changes in specific gravity, &c., which were to be expected. That is to say, the specific gravity of the blood and blood plasma rose, while the specific gravity of the muscle and skin fell. He had found that the production of dropsy in this way was brought about with more certainty if the blood contained in the limb were simply arrested than if the limb were rendered completely anæmic and kept in that condition for an hour. This he explained by the supposition that starvation of the limb was a less potent factor than starvation combined with poisoning by the waste products of tissue metabolism. He believed that the real causes of dropsy were to be found in these two factors, starvation of the tissues and their poisoning by waste products. The actual manner in which the fluid left the blood-vessels was, he believed, an excess of the normal process by means of which the nutrition of the tissues was maintained. Normally when a tissue was functionating or when it was exposed to warmth its blood-vessels dilated and there occurred an increased amount of lymph flow. He thought that the same factors were at play in the pathological processes constituting the different varieties of dropsy. Upon this view the tissues would determine the occurrence of dropsy primarily and not the blood-vessels. No doubt the process became highly complicated in most cases, but he had never been able to understand how the supporters of the mechanical view of dropsy could explain the dropsy that occurred about the ankle when a surgeon ligatured the femoral artery in Hunter's canal, on the one hand, and the remarkable absence of dropsy in cases of congenital heart disease, in which the evidences of increased venous pressure were excessive, on the other. He maintained that the view which he put forward was a better working hypothesis than the other, that it was competent to explain a larger number of varieties of dropsy, and that it indicated lines of treatment which were more likely to be useful.

Dr. W. EWART wished to refer to the clinical aspect of the subject. There was, he believed, a nervous factor in the causation of dropsical effusions and particularly in localised œdema—e.g., that associated with abscess or acute gout. Here a vaso-motor change was rendered evident in the redness. In the localised œdema of paralysed limbs there was also probably nervous influence. Passing to the more general œdemas, and particularly to renal dropsy, his method of treating chronic tubal nephritis by feeding and drainage had lead him to believe that the central nervous control, stimulated by the toxicity of the blood, took the place of the local nervous influence in the localised œdemas. As soon as the dropsical fluid was allowed to escape—e.g., by acupuncture—diuresis at once took place. He thought that this could be best explained by the hypothesis he had put forward.

Professor C. S. SHERRINGTON remarked that it might be impossible to separate the action of the vessel wall from that of all the other tissues around it, but the vessel wall was the one constant element and justified the inference that this was the chief seat of change. He would like to ask what was the experimental evidence of changes in the vessel wall as regarded its permeability—using that term in its physical sense. There must be a very slight alteration in the nutrition in the vessel wall in cardiac disease.

Dr. NEWTON PITT wished to refer to a question which had never been satisfactorily answered—Why was it that in mitral stenosis there was such a marked tendency to ascites and no œdema, while in mitral incompetence there was œdema rather than ascites? The late Dr. L. C. Wooldridge came to the conclusion that the blood-change was the main factor in the production of dropsy.

Dr. W. P. HERRINGHAM, while admitting that the mechanical was not a satisfactory explanation, whatever the immediate cause of the dropsy might be—whether a drainage in the vessel-wall or in the tissues outside—and while admitting that malnutrition played an important part, could not help thinking that there were many facts which pointed to the immense importance of mechanical forces. For instance, even in generalised renal dropsy, if a patient lay on his right side, the right side of the face would be more swollen than the left.

Dr. HALE WHITE remarked on the suddenness or rapidity with which the ascitic fluid might be poured out in hepatic disorder, a fact which he regarded as against the view that it was due to the contraction of the fibrous tissue within the liver. In some cases of the most extreme contraction of the liver there was no ascites. The largest amount of ascitic fluid occurred in cases where the peritoneum was damaged, as in chronic peritonitis, not in cases where the portal vein was obstructed.

Dr. ROSE BRADFORD, while agreeing that the amount of dropsy was not correlated to the degree of pressure, could not agree with Dr. Hale White in his explanation. He (Dr. Bradford) had always regarded the œdema of the legs in ascitic cases as due to a slight constriction of the inferior vena cava where it passed through the liver.

Professor STARLING, in replying, said that as regards ascites he had ligatured the main trunk of the portal vein, producing very great congestion of the intestines, but no ascites was produced at any time. This showed that the rise of pressure was not the essential change. He had repeated Dr. Wooldridge's experiments but he had come to opposite conclusions to him.

Dr. F. S. TOOGOOD exhibited a specimen of a Hydatid Cyst of the Heart which had occurred in a man, aged 41 years, who presented no symptom besides progressive asthenia from which he ultimately died.

HARVEIAN SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on March 21st, Mr. J. JACKSON CLARKE, Vice-President, being in the chair.

Dr. E. CAUTLEY showed a man, aged 41 years, with extensive Generalised Degeneration of the Arterial System. The man had been a sailor for 20 years and for the last six years he had been a cab-driver. He had syphilis 15 years ago and had suffered from psoriasis for 10 years on and off. He came under observation last November for vomiting and abdominal pain. There was very marked thickening of the arteries, more especially of the abdominal aorta, which felt like a rigid, thick-walled tube. The arterial tension was not raised; there were no evidence of hypertrophy of the heart and no ocular changes. For a month he had a variable amount of albuminuria, but no albumin had been detected during the last three months. After the gastric symptoms had subsided he improved steadily on large doses of iodide of potassium. Dr. Cautley thought that the gastric symptoms were due to deficient nutrition of the stomach through the arteries supplying it being involved in the disease, and he raised the question whether the arterial degeneration was due to some form of syphilitic arteritis, although it was most unusual to find such a condition so late in the disease.—Mr. CAMPBELL WILLIAMS said that there were certain cardinal points in the case that were against the condition being syphilitic. The size, number, and amount of the involved arteries, together with the extreme slowness of the process, which had been going on for years without producing obliteration of any arterial lumen, were rather in favour of a diffused and early stage of atheromatous degeneration. The skin lesion was a coincidence. It was not a squamous syphilide but simply ordinary psoriasis occurring in a patient who happened to possess a former syphilitic history. Iodide of potassium was a drug that was of service in treating psoriasis as well as in treating syphilis.—Dr. CAUTLEY, in reply, agreed in the main with what Mr. Campbell Williams had said, but he thought it probable that the syphilis was largely responsible for the arterial disease, even if there was not a true syphilitic arteritis.

Mr. P. L. DANIEL showed a case of Enlarged Spleen with no Leucocytosis. The patient, aged 11 years, born in Yorkshire, had lived chiefly at Kingston-on-Thames, and had never lived abroad or in the fen country. There was a history of whooping-cough and indefinite illnesses at various times, but not of measles. The patient was admitted into Brompton Hospital under the care of Dr. T. H. Green as a case of early phthisis, there being pain in the left side and cough, while there was a swelling found in the left hypochondrium. There was no phthisis. In February, 1900, the patient was transferred to Charing-cross Hospital. The temperature was 99° F. The abdomen was slightly full but there was no obvious swelling. On palpation a tumour of firm, uniform consistence was felt extending from the left costal margin to within an inch of the outer part of Poupart's ligament and from the mid-line internally round the left loin to the erector spinæ behind. The edge was sharply defined and fairly thin. On the anterior edge were two or three notches. The tumour occupied the whole of the left loin except a finger's breadth above the iliac crest in the ilio-costal space. It was dull except at the lower angle which became resonant on inflation of the rectum. No band like that of colic resonance obtained at any time. It moved slightly with respiration. It could be taken between the hands in front and behind, but could not be moved to any extent. Above it extended to the fifth rib in the nipple line, to the seventh in the mid-axillary line, and to the eighth in the scapular line. It was slightly tender. The red corpuscles in the blood numbered 3,740,000 per cubic millimetre, the white corpuscles 12,000 per cubic millimetre, and the amount of hæmoglobin was 70 per cent. There were no symptoms beyond occasional pain in the side and breathlessness which had developed during a stay of some months in the hospital. Twelve months later (in 1901) there were pain in the side, languor, and breathlessness; a doubtful trace of blood in the sputum at times; otherwise the patient had been quite well. At the present time the tumour remains as before. The blood showed 3,700,000 red corpuscles per cubic millimetre and 9000 white corpuscles, the amount of hæmoglobin being 60 per cent. There was little or no enlargement of the lymph glands. The patient was said to have bled a few drops from the nose once recently.—Dr. CARTER regarded the case as one of pseudo-leukæmic enlargement of the spleen. He thought that it resembled cases of much enlarged spleen and anæmia seen in infants, and he suggested that the condition had been present since infancy. The child was not now markedly anæmic and in all probability the disease was a hyperplasia of the spleen which was no longer progressive.—Dr. C. S. JAFFÉ made a few remarks and Mr. DANIEL, in reply, said that he thought that the case was one of splenic anæmia.

Mr. DANIEL also showed a case of Bilateral Ossification of the Tendo Achillis and Plantar Ligaments with Skiagram. The patient, a man, aged 35 years, had suffered from rheumatic (?) pains all his life. His father was also rheumatic. The patient had gonorrhœa when he was 22 years of age and a sore on the penis which disappeared in 14 days by local applications only. No evidence of syphilis was obtained. From earliest recollection he had had tender feet, but when he was 18 years of age he was considerably exposed to bad weather, and he took a chill and suffered great pain in both feet, especially in the heels. Since then he had always been more or less crippled. The attack of gonorrhœa four years later did not appear to have affected the condition in any way. He often had marked shooting pains in the pectorals, the muscles of the back, the deltoids, and the glutei, rendering him unable to move his limbs, the joints appearing fixed. There was no swelling of the joints noticed. He was able to work a tricycle with fair comfort, but he walked with difficulty, and could hardly walk at all when barefooted. Sometimes his boots hurt him very much, but on the whole he was more comfortable in them than when his feet were bare. He was strong, well built, walked very lame, and had a marked stoop. There was no evidence of myositis ossificans and he had good movement in the back and all the joints, including the ankles, which he could flex and extend perfectly when his feet were off the ground. The heels, which were slightly enlarged, were glossy but not red, there was some rigidity of the great toes, and the arch of the foot was slightly depressed. The point of maximum tenderness was at the tip of the heels, but the whole region was tender. An irregular mass could be felt and seen on either side of, and probably on, the tendo Achillis for one and a half inches above the os calcis. Ossification in the plantar ligaments could not be felt. Cold, damp, and walking increased the pain. The condition had been progressively worse. Liniments, especially of iodine, and iodine internally gave slight relief. The condition had been treated for years as osteo-arthritis, of which there was no evidence. No other tendons were involved.—Mr. JACKSON CLARKE said that he regarded the formation of bone in the tendo Achillis and the long plantar ligament as essentially of the same nature as the ossification of the periosteum and ligaments observed in the vertebral column in osteo-arthritis of the spine. The patient said that his father had suffered from gout and a similar predisposition probably underlay the patient's troubles. He (Mr. Clarke) thought that a thorough course of medical treatment and a course of spa treatment at Buxton or Bath followed, if necessary, by drilling the bone at the base of the osteophytes, offered the best chance of success.—Mr. WILLIAMS made a few remarks.

Mr. DANIEL also showed a case of Enlarged Liver with Jaundice of Uncertain Cause. The patient, a labourer, aged 54 years, had always been healthy and had never lived abroad. He was not over-addicted to alcohol, two pints of beer daily being the average quantity taken by him. The present illness began on July 18th, 1900, with listlessness and a feeling of being out of sorts and loss of appetite. There was no pain of any kind. The urine was high-coloured and occasionally the stools were light-coloured. He was told that he was getting yellow and the colour increased in depth till August. He was at home from August to November with varying depths of jaundice and the signs as before. There was also swelling of the feet and the abdomen at night, which disappeared by the morning. There was no history of pain or colic at any period. He was treated for dyspepsia and by mild purgation. He resumed work in November. He was still jaundiced but was better in health. The jaundice continued and varied in depth with constipation till February of this year when the old symptoms returned. There was some wasting. At the present time there was intermittent fever, the temperature ranging from 101° to 96° F. The patient was thin and moderately

jaundiced. The liver extended from the fifth rib on both sides to the level of the right anterior superior spine, completely obscuring the stomach resonance. It was uniformly smooth, firm, and the edge was sharp. Just to the right of the umbilicus was a localised swelling of the size of a small orange, partly separated from the main mass by a slight sulcus. This was free from tenderness, slightly moveable, and non-fluctuant (? gall-bladder). The spleen was normal. There were no petechiæ and no ascites was present. The urine and stools varied slightly, the latter being now of a drab colour. The insidious onset of the illness, the absence of colic, the slight emaciation, the partial obstruction to the common bile duct, the possibly enlarged gall-bladder with the size of the liver, the normal spleen, and the pyrexia, made the case a complex one.—Dr. CAUTLEY thought that the diagnosis was either malignant disease of the liver or an early stage of cirrhosis. He did not find any distinct evidence of enlargement of the gall-bladder and thought that prominence of the rectus muscle on that side might simulate such a condition.—Mr. E. W. ROUGHTON also commented on the case from a surgical point of view.

Mr. DANIEL also showed a fourth case—one of Supra-hepatic Abscess treated by the Trans-thoracic Route. The patient, a man, aged 29 years, had been a signalman in the navy. He had had remittent fever and dysentery (mucoid stools with tenesmus but no blood) in 1896 when on the China station. Since then he had had three attacks of what was called "gastritis," and the condition had been treated as such. On one occasion he was thought to have a swelling in the right side which was diagnosed as abscess of the liver, but it disappeared apparently in the course of six weeks. He left the navy in 1898 and these attacks had all occurred in England between the beginning of 1897 and 1900. In 1897 he had suffered from syphilis. This fourth and last attack began in January, 1900, with pain in the base of the right chest which was not affected by food. The patient was flatulent, anæmic, and constipated. The liver was not palpable or enlarged and the spleen was in a similar condition. He had had no definite physical signs, but abscess of the liver was suspected. On March 16th, having been treated for dyspepsia, further notes state that there was exacerbation of pain in the epigastric region. One month later (April) deficiency of movement of the right chest was noted and a small effusion of pus was suspected. The liver was still not palpable. The patient was admitted under Dr. Cautley's care three weeks later with an enlarged liver reaching to the umbilicus; he looked very ill, thin, and anxious. His skin was of an earthy, sallow colour. The temperature was 100·4° F. He was intensely depressed in spirits. A large swelling existed in the right side, filling up the whole epigastric and upper part of the right lumbar region. It was firm and of elastic consistence, but there was no definite edge. There was no fluctuation and the swelling was dull on percussion. This impaired resonance extended upwards to the fourth rib on both sides in front and to within an inch of the angle of the right scapula behind. The breath sounds were deficient over the right base. The apex-beat of the heart was displaced upwards and outwards considerably. There was tenderness in the epigastrium which was most marked when the patient was lying on his back. The patient slept well, but perspired a great deal at times. There were aching pains in the tip of the right shoulder; slight leucocytosis was present. The aspirating needle in the eighth space of the scapular line revealed a reddish-brown, chocolate-like fluid. This consisted of débris and disintegrating cells and gave a pure culture of the bacillus coli communis. The following operation was performed. One and a half inches of the right rib were removed in the mid-axilla, and the diaphragm was pushed up into and above the wound. The diaphragmatic pleura was raised and sewn to the periosteum and parietal pleura. The diaphragm was incised and three and a half pints of pus escaped; this was odourless. The extent of the cavity could not be ascertained by the finger but the sac was lined by soft thick granulations. A one-inch tube was inserted. The temperature fell to normal, having been remittent. The patient picked up rapidly and gained weight, the appetite returned, and he was up in one month. Scrapings of the sac wall showed amœbæ. The heart returned to its normal position. At the present time (11 months after the operation) the patient says that he never felt better in his life. The lung had expanded. In this case the notable points were the length of time after leaving the East before the patient developed definite signs of liver abscess; the intensity of the gastic irritability; the shoulder tip pain; and, as Dr. Cautley indicated, the surprisingly rapid development of the abscess. Mr. Daniel considered the cavity to be limited by the coronary ligaments and liver and diaphragm—therefore, the abscess was supra-hepatic.—Dr. CAUTLEY said that when he first saw the patient he examined him carefully for evidence of hepatic abscess but could find no such evidence. The increase in size of the abscess was extraordinarily rapid.—Mr. JACKSON CLARKE made a few comments.

Mr. ROUGHTON showed a Man whose Femoral Artery had been tied for Popliteal Aneurysm.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on March 19th, Mr. F. Farrow, the President, being in the chair.—Dr. F. W. Eurich gave a Microscopical Demonstration.—Mr. Percy Lodge showed an Inhaler for use with Chloride of Ethyl.—Dr. C. F. M. Althorp showed a patient with a Tumour of the Palate.—Dr. Campbell showed a Cretin Dwarf.—Dr. Jason Wood showed: (1) A patient with very extensive Cancer of the Neck; and (2) the Temporal Bone and Cerebellum from a case of Cerebellar Abscess.—Dr. James Kerr showed a case of Sarcoma of the Conjunctiva.—Dr. Kerr read a paper based on 50 cases of Tobacco Amblyopia seen in the past year. It was, he said, important to exclude kidney disease by testing the urine and tabes by testing the knee-jerks; then in a case of failing vision in middle age not improved by glasses there remained cataract, glaucoma, and toxic amblyopia as common causes. Cataract should only be diagnosed after inspection in the dark room. The colour scotomata differentiated from simple glaucoma. The ordinary test with a square centimetre of coloured paper failed to detect about one-third of the scotomata; smaller objects, such as a pin-head with red sealing-wax on it, were useful; it might also be necessary to test in a reduced light. One-fifth of the number showed marked unilateral affection so that each eye should be tested separately. Hypermetropia was present in three-quarters of the hospital cases. Other debilitating circumstances were frequent, and although it generally required at least three ounces of tobacco weekly for many years, with reduced health, as in the case of a woman quoted, one and a half ounces had produced a toxic result in less than a year. The only treatment required was to stop tobacco; strychnine hastened recovery. The importance of always excluding tobacco effects—often masked by glaucoma, cataract, or cerebral lesions—was insisted on, their detection changing a hopeless prognosis as to vision into a very favourable one.—Dr. W. Arnold Evans (medical officer of health of Bradford) read a communication on an Outbreak of Small-pox in Bradford. He said that on Dec. 26th, 1900, he was asked by a medical practitioner to see two cases of suspected small-pox in consultation and was at the same time informed that the medical practitioner had about three weeks previously attended in the same house a case which he considered to be one of varicella in an adult. During the few days following some other cases of small-pox were reported in the same locality, all the infected persons being either friends or relatives of the patients who first came under his notice. About 16 days after the occurrence of the early cases an intimation from the medical officer of health of a neighbouring town showed that there was in all probability an outbreak in another part of the city. An investigation proved this surmise to be correct, for a girl was found in the crusting stage of variola, having been attended by a medical man for varicella. It also transpired that this girl was a relative of, and had been infected by, one of the patients seen on Dec. 26th, 1900, so that what at first sight appeared to be two outbreaks of small-pox was really one. The outbreak up to the present time had consisted of 27 cases, seven of which were those of unvaccinated persons whose ages varied from six years to 36 years, the other 20 cases being those of persons who showed some evidence of having been vaccinated in infancy. Although some of the cases of the unvaccinated class were severe no deaths had occurred in either group. Dr. Evans thought that there should be very little difficulty in distinguishing cases of variola or varioloid from varicella, provided the following points were given a due amount of attention—viz.: (1) the distribution of the eruption which in small-pox was most copious on the face, wrists, hands, ankles, and feet, and which in varicella

occurred chiefly on the trunk; (2) the constitutional symptoms which in a case of small-pox with a copious eruption were severe and in varicella mild; and (3) evidence of vaccination, small-pox being very rare in well-vaccinated persons under 10 years of age. Dr. Evans said that he had several times seen severe cases of small-pox mistaken for erysipelas, the misleading symptom being swelling of the face and eyelids. He stated that a characteristic of the present outbreak was the comparative mildness of the attack both in vaccinated and unvaccinated persons. Referring to individual cases Dr. Evans instanced two of small-pox in pregnant women; one woman was delivered in the eighth month, within seven days of the onset of the attack of small-pox. The child was vaccinated immediately after birth, and although subsequently fed at the mother's breast escaped an attack of small-pox. The other woman miscarried at about the fifth month; the fœtus, which had evidently been dead for a considerable time previously to birth, showed signs of a copious eruption of small-pox, chiefly on the back.—The paper was discussed by several members and Dr. Evans replied.

BRITISH GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on March 14th, Dr. J. A. Mansell Moullin, the President, being in the chair.—Mr. Furneaux Jordan (Birmingham) showed a Fibroid Uterus removed from a woman, aged 49 years, who had had two children. She made a good recovery.—Dr. Macnaughton-Jones read notes of a case of large Angioma of the Liver removed from a woman, aged 27 years, who had had three children, the youngest being 17 months old. The tumour occupied the right hypochondrium and part of the lumbar region, simulating closely on examination a large moveable kidney. The abdominal swelling was first noticed more than a year previously. The patient's symptoms were great pain radiating across the abdomen and down to the inguinal region, occasional vomiting, and of late rapid loss in weight. The tumour was situated in the free margin of the liver, immediately to the right of the gall-bladder, projecting more on the deep than on the convex surface of the liver. Some deep fissures marked its upper surface, and over its upper and lower aspects there were yellow and dark brown mottled patches. The base of the tumour was gradually ligatured off by passing Deschamp's needles armed with strong silk through it, and ligaturing it in sections. It was thus isolated and finally clamped before it was divided, strong catgut sutures being also used to secure it. It was thus removed with comparatively little loss of blood. She never, however, recovered from the shock, and sank 18 hours after the operation. The tumour, when shrunken after removal, measured three and a quarter inches by three inches. Histologically, it was an angioma of the liver and there was no evidence of malignancy.—Dr. Macnaughton-Jones also read the notes of a case of Primary Miliary Tuberculosis of the Breast, a condition which appeared to be very rare. In support of this view he quoted Mr. Marmaduke Sheild, Mr. Watson Cheyne, and Mr. Shattock, but Mr. J. H. Targett, from the examination of several hundred mammary tumours, considered that tuberculosis of the breast was much more common than was supposed.—Mr. W. Roger Williams read a paper on the Pathology and Surgical Treatment of Uterine Tumours in the Nineteenth Century. After outlining the progress of pathological views from Heister and Hunter to Virchow, he said that Waldeyer pointed out that the doctrine of continuous cellular development ignored the specificity of the tissue elements as revealed by embryology; and though Virchow clearly distinguished carcinoma from sarcoma, it was owing to Waldeyer's teaching that they now looked to pre-existing epithelial cells for the germs whence cancer arose. In 1875 Cohnheim put forward the view that tumours arose from sequestered fragments of the germinating tissues detached during embryonic life. Such fragments had been since found in every part of the body that had been specially examined for them. The uterus was no exception. The track of the Wolffian and Müllerian ducts was strewn with débris of this kind. Mr. Williams then dealt *seriatim* with several varieties of uterine tumours, explaining their origin on this hypothesis. Cancer, he said, had been ascribed to many organisms. Bacteria had been found in uterine myomata, but nothing justified the assumption that the latter were due to the former. Malignant and non-malignant tumours were derived from elements having different developmental tendencies, and the conversion of non-malignant into malignant types need not be anticipated. For the removal of myomata he preferred the vaginal route in suitable cases. He considered that the removal of myomata by abdominal section should be regarded as a means for dealing with certain exceptional cases rather than as the routine treatment.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held at Sheffield on March 15th, Dr. T. B. Grimsdale, the President, being in the chair.—Dr. Arthur Wallace (Liverpool) showed a specimen of Carcinoma of the Corpus Uteri removed by vaginal hysterectomy. The patient made a good recovery.—Mr. Walter Thompson (Leeds) showed a Uterus with Fibromyomata undergoing degeneration. The soft, brain-like appearance of the growth, together with the clinical features of the case, strongly suggested malignancy; the microscopic examination, however, gave no evidence of the latter. The growth was removed by hystero-myomectomy. Death occurred from intestinal obstruction produced by adhesion of a coil of bowel to the line of suture of the peritoneum.—Mr. R. Favell (Sheffield) showed: (1) A Vesicular Mole which, dating from the last normal period, had enlarged the uterus so that its fundus reached two inches above the umbilicus at the third month, at which time the mass was expelled; (2) a Carneous Mole of the size of an orange which had been retained in the uterus until the end of the seventh month; and (3) a Fœtal Monster with a Large Sacral Meningocele, together with Absence of the Abdominal Wall.—Dr. Martin (Sheffield) showed the Ovaries removed from a case of Intractable Hæmorrhage which had resisted all other treatment, including curetting. Both ovaries were much enlarged and cystic; the right one was prolapsed and moveable and the left one was adherent in its normal position, so that it was not felt on ordinary vaginal examination.—Dr. Sinclair (Manchester) related a case of Cæsarean Section. The operation was successful for both mother and child.—Dr. J. B. Hellier (Leeds) showed drawings and photographs of a case of Congenital Deformity of the Skull. The deformity consisted of a groove surrounding the head at the level of the orbits anteriorly and the posterior fontanelle behind, so causing an unusual prominence of the frontal and occipital regions. The condition was thought to have been caused by the constriction of an amniotic band.—The President read notes of a fatal case of Phlegmasia Alba Dolens. The patient came under his care at the Liverpool Royal Infirmary three weeks after confinement. The labour was normal, but there was some rise of temperature during the early part of the puerperium, for which the uterus had been washed out. The right thigh and leg began to swell on the tenth day. When admitted to the infirmary there were frequent rigors and irregular high temperature and enormous enlargement of the right thigh and leg. The left thigh and leg were normal to all appearance. There was no vaginal discharge; the uterus was moveable, it was not much enlarged and was not tender. The streptococcus was found in the blood. Anti-streptococcic serum was used once or twice daily and produced temporary improvement, but the patient eventually died one month after admission—namely, seven weeks after her confinement. At the necropsy infarcts were found in the spleen and the right lung. The blood gave practically pure cultures of streptococcus but no staphylococci. The uterine veins were thrombosed and there was pus in the perivascular connective tissue. The left femoral vein and external iliac were full of pus extending up to the vena cava. The right femoral vein was thrombosed. It was interesting to note that during life there were no local signs of the suppurative phlebitis in the left leg, the pain and swelling being on the right side.

NEWCASTLE-UPON-TYNE CLINICAL SOCIETY.—The fifth meeting of the session of this society was held on March 7th, Dr. F. Hawthorn, the President, being in the chair.—A letter from the British Congress for the Prevention of Consumption to the society inviting delegates to the meeting in London on July 22nd was read.—Dr. W. T. Hall showed a patient in whom the Heart was found to be on the Right Side. A discussion followed as to diagnosis between transposition of viscera and fibroid phthisis drawing the heart to the right side, the majority deciding in favour of the latter condition.—Dr. F. C. Coley showed three cases of Nervous Disease. The first was that of a girl, aged seven years, with mitral regurgitation, partial hemiplegia, with previous albuminuria. In the second case a girl had pain

and weakness in both legs and tenderness on pressure on both calves. Walking was rendered unsteady, the child taking hold of anything that might be near for support. There was no history obtainable of scarlet fever, diphtheria, or arsenic administration. There was absence of both knee-jerks. In the third case, that of a boy, seven years old, there were incoördination of movements on walking, slight right facial paralysis, and exaggeration of the left knee-jerk. Previously walking had been impossible for a time.—Dr. W. E. Harker showed some Plague Bacilli obtained from the spleen of a rat killed on a plague-infected vessel in which 13 cases of plague among the crew had taken place with 4 fatalities. The macroscopical examination of the body of the rat showed œdema of the hind leg and the liver enlarged to three times, and the spleen to four times, the natural size.—Dr. G. G. Turner showed the specimen from a fatal case of Intussusception in a child on whom he had operated. The child was collapsed before operation. A lateral anastomosis was effected, as the condition was irreducible (even after death). Its position was just above the ilio-cæcal valve.

IPSWICH CLINICAL SOCIETY.—A meeting of this society was held on March 14th, Mr. James Hossack being in the chair.—Dr. Stanley Hoyland showed a child with a Patent Foramen Ovale. She was subject to cyanotic attacks from birth.—Dr. R. W. Brogdin showed (1) a young lad, 15 years of age, with a large, rapidly growing Bronchocele; and (2) a man with an Enlargement of the Lower End of the Left Femur and also of the Left Tibia. The patient had been under observation for a year. His general condition was extremely good. He was inclined to think that the swelling was sarcomatous.—Dr. Francis Ward showed (1) a Card Specimen and also Microscopic Slides from a case of Symmetrical Gangrene of the Toes in a young infant; and (2) a Specimen of Blood in a very advanced case of Hodgkin's Disease.—Dr. W. A. Gibb showed a rapidly-growing Tumour of the size of a pigeon's egg which he had removed from the ear of a young lad. He commented on the comparative rarity of these cases and the fact that it had followed an injury. It was probably fibro-sarcomatous in character.—Mr. Hossack showed a seven months' Anencephalic Fœtus.—There was a discussion afterwards.

Reviews and Notices of Books.

The Early Days of the Royall Colledge of Phisitians, Edinburgh. By R. PEEL RITCHIE, M.D. Edin. Edinburgh: George P. Johnston. 1899. Pp. 330.

DR. ROBERT PEEL RITCHIE, in his capacity of President of the Harveian Society of Edinburgh, delivered at the 114th festival of that society, in June, 1896, the address which has been expanded into the book now before us. This fact explains why Dr. Ritchie commences his book with a section entitled "William Harvey," which at first appears strange, seeing that Harvey died in 1657 and the Royal College of Physicians of Edinburgh was not founded until 1681. But, as Dr. Ritchie shows, Harvey's example and influence played no small part in the future founding of the Edinburgh College. In Harvey's time there was no university or medical school in England, Scotland, or Ireland sufficiently well equipped to give a medical education worthy the name, and from 1617 various attempts had been made in Scotland to found a college of physicians. Dr. Ritchie thus sets forth the connexion of Harvey with the aforesaid attempts. The first attempt was made in 1617, when James I. (of England) revisited Scotland. Two years previously Harvey had been chosen to teach and to lecture in London. The second attempt was made in 1630 and two years previously Harvey's great work on the circulation had appeared. The third attempt was made in 1657, shortly after Harvey's term of teaching had ended, and he had handed over the Lumleian lectureship to his intimate friend, Sir Charles Scarborough, whose help and influence contributed so greatly to the success of the fourth and final attempt. The project of a College of Physicians was bitterly opposed by the universities, the town council, the chirurgeons, and the clergy, who though at this date mainly Presbyterian were no less opposed to the formation of the College than had been the Episcopalians in former years. The opposition to the scheme seems to have been very skilfully overcome, mainly by Dr. Robert Sibbald who was afterwards knighted.

How the matter was engineered must be sought for in the pages of Dr. Ritchie's book, but we may say here that the protagonists were Sibbald, the Earl of Perth, Lord Melfort, and Sir Charles Scarborough, the King's physician. The charter was finally obtained on Nov. 29th, 1681, being, appropriately enough, St. Andrew's day. The claim of the College was not a very far-reaching one. The proposers of it were willing not to go in for teaching or for dissections, as did the surgeons, so that their candidates for incorporation might be able to practise "flewbothomea." But what the physicians did claim was "to have authority to supervise Medical Practice in the City, Suburbs, and Liberties thereof, and to practise Medicine therein shall only be permitted to those Physicians licensed by the Fellows of the College after trial and examination, and no one shall be admitted Socius until he has first obtained the licence to practise from the College." The charter, however, gave the College no power to examine Scottish graduates, but Scottish graduates had to have the licence of the College to practise.

Within a period of just under three years from the foundation of the College four great reforms were carried through—namely, the compilation of the Edinburgh Pharmacopœia, the opening of a dispensary for the sick poor, the institution of regular examinations for the licence to practise, and the medical conferences at the College which were a form of what would now be called meetings of a medical society. They were held monthly and the first discourse was delivered by the President, Sir Archibald Stevenson, "on the Polypus Cordis, to the great satisfaction of the Colledge." The Pharmacopœia, however, owing to opposition on the part of some of the Fellows, did not appear until 1699, a delay of 18 years. In view of the controversy which has lately taken place concerning the title of the King it is interesting to note that the book was dedicated: "Serenissimo Gulielmo II. D. G. Scotiæ, Angliæ, Franciæ, et Hiberniæ Regi ..... " There had, of course, previously only been one William of Scotland who began to reign in 1165.

The moving spirits of the College were Dr. Archibald Pitcairn and the four knights—Sir Archibald Stevenson, Sir Andrew Balfour, Sir Thomas Burnett, and last, though not least, Sir Robert Sibbald. Dr. Ritchie gives full biographical notices of these five eminent men, and with regard to Sibbald expended a great deal of time and trouble—albeit a labour of love—in ascertaining the date of his death and the place of his burial. He died on August 9th, 1722, and was buried in "Phesdoes ground," Sunday, August 12th, 1722. Phesdo was John Falconer of Phesdo and his ground was in Greyfriars Kirkyard. Dr. Ritchie gives a picture of it as it now is—as dismal as that at the gate of which "Poor Jo" used to sit.

No stone marks Sibbald's memory and one might well, we think, be subscribed for. Dr. Ritchie's book is full of interesting facts and is a monument of painstaking literary research. The type, illustrations, paper, and general printing of the work are, as is to be expected in an Edinburgh book, excellent.

Rectorial Addresses delivered before the University of Edinburgh, 1859–1899. Edited, with an Introduction, by ARCHIBALD STODART-WALKER, M.B., F.R.C.P. Edin. Pp. xxxvi.–337. London: Grant Richards. 1900.

DR. STODART-WALKER has been excellently well inspired to produce this volume which contains a "baker's dozen" of addresses delivered before the University of Edinburgh

by the distinguished men who during 40 years past have filled the office of Lord Rector. A mere list of the names of the contributors—which includes, among men less eminently distinguished, Mr. Gladstone, Mr. Carlyle, Lord Rosebery, and the first Lord Iddesleigh—suffices to challenge attention for the work. And the addresses themselves amply reward the attention. In every case the preparation of the address demanded an effort on the part of the speaker and the efforts of such men are not fruitless. The results are strangely various and probably no one will peruse them without surprise. For example, it is not a little strange to find Mr. Goschen discoursing with great effect upon the part which imagination plays in the prosecution of serious studies, although the reader rises from the perusal of his speech with the clear perception that if there is one field in which more than in any other a cruel experience forces home upon her pupil the need of entering by imagination into the thoughts, motives, and point of view of an opponent that field is politics. Most readers will probably take up this volume with the expectation that Mr. Gladstone's scholarly tastes and ready sympathies will make him *facile princeps* in the capacity of Lord Rector. But in this we think that they will for the most part own themselves mistaken. In "the work of the university as a great organ of preparation for after life," and again in "the place of ancient Greece in the providential order of the world," Mr. Gladstone found very congenial themes, in fact, themes that were congenial overmuch. There is something "donnish" about his addresses both in form and substance which makes the reader feel that they might quite fittingly have been delivered in a classroom and from a professorial desk. They want the breezy, open-air character which should accompany, should even be the characteristic feature of, utterances coming from those whom the outer world has absorbed and by absorbing withdrawn them from a direct share in the pre-occupations of a professed and cloistered student life. The feeling arises that a Lord Rector who too readily falls into line with the march of college thought and expression fails in the highest function of his office, which is to electrify the scholastic body by bringing into contact with it the negative pole of a personality charged with the influence of the great world outside. For a very similar reason Thomas Carlyle falls short of pre-eminence in this company. He also is too unworldly for the post. If we were called upon to adjudicate upon the comparative merit of these deliverances we should have no difficulty in singling out Lord Robertson's address, delivered in 1895, as being quite an ideal performance. And this involves no disparagement of Mr. Goschen's most admirable lecture on the uses of imagination to which we have already alluded, or of Lord Rosebery's pithy and elegant reflections on the highest forms of patriotism. Nor, again, do we under-value the sympathetic sentences in which Lord Moncrieff linked the present university with its own past. All these were admirable, each in its own way and every one, indeed, indispensable to the completeness of the collection considered as an anthology. But Lord Robertson, as it seems to us, struck the exact note with unrivalled precision in his address upon the public value and public duties of disciplined intellect. The subject was one which could only be dealt with effectively by a man who stepped aside for the purpose from the regular course of a public career. It was, therefore, peculiarly fit for a rectorial address and Lord Robertson's matter and manner both were equally admirable. Nothing, indeed, could have been more appropriate to the place and time than the delicate irony of his style or the robust tone of his admonitions. Take, for example, the following passage as a specimen of these qualities: "Of the mental habit which I describe as that of culture it is a characteristic not to overrate education itself. The tendency to do so arises from an incomplete view of the panorama of life—a blindness to all but those mechanical powers which grind out uniform results. Individual education—the education of school or of school and college combined—is strong, but other things are stronger—race, character, religion, sentiment, interest in the past, loyalty to persons, knowledge of the world, business capacity, above all, the vast accumulated funds of wisdom and guidance which are covered by the invidious term prejudice and the august name of authority. The appreciation of these elements, and especially of their due weight in a civilised community, is a sure criterion of cultivated intelligence."

We must not, however, indulge in quotation. The book, suffice it to say, affords a collection of most unusual interest of essays by representative men to which its editor has prefixed a thoroughly appreciative and very serviceable introduction.

Diseases of the Nose and Throat. By F. DE HAVILLAND HALL, M.D., F.R.C.P. Lond., and HERBERT TILLEY, M.D., B.S. Lond., F.R.C.S. Eng. Second edition. London: H. K. Lewis. 1901. Pp. 605, two Coloured Plates, and 80 Illustrations. Price 10*s.* 6*d.*

THE first edition published by Dr. de Havilland Hall was fully 50 pages less than this issue which has undergone a careful revision and enlargement, and the hand of Dr. Tilley is plainly seen in some parts, especially in the chapter on the Frontal Sinus.

As a handbook the volume as it stands at present is highly to be commended; it possesses the great merit of laying down with decision and directness the line of treatment to be adopted under various conditions, and with the aid of the reasonably comprehensive list of formulæ at the end will enable students and practitioners to recognise and treat most conditions of the throat and nose that do not necessitate the skilled hand of the specialist.

The theory of Bosworth that non-specific perforation of the septum is due to the erosion by dust, &c., is said here to be confirmed by the fact that cement factory hands are frequently thus afflicted and that they constantly introduce the finger into the nose and thus abrade and eventually perforate the structure. We do not think that this proves Bosworth's theory, but it materially aids in substantiating the view that constantly picking the nose is the cause, the irritating dust being merely the excitant. Ulcerative processes of the tonsil, we think, might receive more attention in the next issue. The illustrations are frequently too sketchy and not all of them, notably that of adenoid vegetations, true to life. With these exceptions and especially as a text-book the work deserves a wide popularity.

Text-book of Histology: including the Microscopic Technic. By Dr. PHILIPP STÖHR, Professor of Anatomy at the University of Würzburg. Third American, from eighth German, edition. Translated by Dr. EMMA L. EILSTEIN, formerly director of the laboratories of Histology and Embryology, Woman's Medical College of Pennsylvania. Edited, with additions, by Dr. ALFRED SCHAPER, Professor of Anatomy, University of Breslau, formerly Assistant Professor of Histology, Harvard Medical School, Boston, Mass. 301 illustrations. London: Rebman, Limited. 1901. Pp. 432. Price 14*s.* net.

WE have to welcome this, the third American edition of Stöhr's Handbook, translated without alteration from the eighth German edition, though still possessing the editorial additions to text and illustrations which appeared in the previous American issue. That the book is extremely popular, and deservedly so, both in Germany and among English-speaking students is shown by this rapid multiplication of editions. Professor Minot in his introduction describes the work as "combining scientific thoroughness with simplicity, conciseness, and clearness of exposition," and anyone using the book must admit that this description

is fully justified. The most characteristic and strongest parts of the work are, perhaps, the technical appendices to the various chapters with their extremely practical directions for the obtaining and preparing of histological material. Regarding histology as a branch of anatomy the author rigidly confines himself to what may be actually demonstrated, and it is this probably which leads him to eschew all reference to the theories which have been invented to explain the appearances presented by striped muscle, and even to avoid any nomenclature of the varieties of leucocytes, though this may lead to some bewilderment of the student when he reads other works. The description of the liver is extremely good, though we miss any reference to Kupffer's cells. The descriptions and illustrations of the organs of special sense are also excellent.

The chapters on Microscopic Technic are found at the beginning and end of the volume, and the methods are most judiciously selected to combine simplicity with efficiency. The illustrations to the book have always been distinguished for their excellence, and in the present edition they are well and carefully reproduced. We notice a printer's slip on page 99 and a transposition of letters in Fig. 258, but the volume is generally well printed on good paper and reflects credit on the publisher. It would be difficult to find any book in English on histology which more fully meets the requirements of the student or even of the professional histologist than the work under review.

Laryngeal Phthisis, or Consumption of the Throat. By RICHARD LAKE, F.R.C.S. Eng., Surgeon Laryngologist, North London Hospital for Consumption; Surgeon, Metropolitan Ear and Throat Hospital; Surgeon, Royal Ear Hospital; Surgeon for Diseases of the Throat and Ear, Trinity College of Music. With 36 Illustrations, 21 of which are coloured. London: Rebman, Limited. 1901. Pp. 94. Price 7*s.* 6*d.* net.

THE importance of tuberculosis of the larynx is frequently under-estimated, for it is looked upon as a complication of pulmonary phthisis of no great moment, and as it is often considered to be peculiarly irresponsive to treatment it has been greatly neglected. Yet it may truthfully be said that of all the common concomitants of tuberculosis of the lungs laryngeal phthisis is the most important and its treatment at the present day is by no means unsatisfactory. Mr. Lake has done well to put before the medical public this interesting account of the present position of our knowledge of this subject, and it is obviously firmly founded on fact, for it is based on the observation of more than 300 cases. Whether tuberculosis of the larynx is ever truly primary is perhaps doubtful, though from *a priori* considerations it might reasonably be imagined that infection from the inspiration of the tubercle bacilli might not infrequently occur. In the vast majority of cases, however, it is distinctly secondary to tuberculosis of the lungs, and it appears from Mr. Lake's statistics to be especially liable to occur in those engaged in sedentary occupations and to be much more common in men than in women. The chief symptoms directly traceable to the lesion are hoarseness and dysphagia, and this latter symptom is in itself sufficient warrant for energetic treatment, for the pain is so severe as in many cases to interfere seriously with the taking of nourishment. This pain is chiefly due to the pressure on the tender epiglottis.

The section on Treatment is necessarily the most important, and Mr. Lake lays stress on the value of treatment directed to the improvement of the general health. As to local applications the author speaks very favourably of formalin and protargol. If the ulcerations are especially well marked the curette should be used early, but after every scraping formalin or lactic acid should be rubbed in. When the epiglottis is very extensively diseased its complete excision by means of the galvano-cautery snare is advised. A convenient form of cutting forceps devised by Mr. Lake is figured and described. The prognosis is always grave, but it has improved markedly with modern treatment. 21 coloured figures are given illustrating the various lesions of the larynx and a table is appended supplying some details of the 320 cases observed by the author.

Altogether the work is clearly and concisely written and it will serve as a useful introduction to an important subject.

LIBRARY TABLE.

Notes on Physiology. By HENRY ASHBY, M.D., F.R.C.P. Lond., Physician to the Manchester Children's Hospital, Demonstrator of Physiology, Liverpool School of Medicine. Seventh edition. London: Longmans, Green, and Co. 1900. Pp. 406.—Napoleon was accustomed to say that the history of France should either be compressed into one volume of moderate size or should be expanded into 20. The same may be said of physiology. The subject is so large that if only the leading points be mentioned a small volume is sufficient, but if details are to be discussed, differences of opinion pointed out, and the arguments for and against particular views fairly weighed, an encyclopædia is required. Dr. Ashby's little volume, which is well known to students, belongs to the former class of treatises, and as a rule is very well and intelligently written. Occasionally, however, space is occupied which might be better utilised. For example, in discussing the velocity of the flow of blood in the arteries Dr. Ashby remarks: "Various instruments are employed for this purpose, the stromuhr of Ludwig and the hæmatachometer of Vierordt being the principal." But the names of these instruments are unaccompanied by any description or illustration, and they must remain for the student mere names to be got up by rote without any corresponding idea of their construction or action. The cause of the varying swiftness of the current of blood in arteries of different calibre and under diverse conditions would have been more useful to the learner. The statements made in the several sections are correct though necessarily brief, and the volume will be found serviceable to the student during his first year of attendance on lectures and as an introduction to larger works.

An Index of Symptoms as a Clue to Diagnosis. By R. W. LEFTWICH, M.D. Aberd. Second edition. London: Smith, Elder, and Co. 1901. Pp. 278. Price 6*s.*—We are glad to see that a new edition of this useful little book has been supplied, and we see no reason to alter the favourable opinion which we expressed in these columns[1] as to the first edition. It undoubtedly is a most useful compilation, but, as in all compilations written by those who know for those who do not know, there are omissions to be found. For instance, under the head of "Jaundice" we find no mention of morbus cordis as a disease of which jaundice is a symptom. True, we see that Dr. Leftwich mentions "cyanotic liver," and this in its turn is most commonly due to morbus cordis. Again, under the head of "Rigors or Shivering Fits," paroxysmal hæmoglobinuria is not given, though an attack frequently commences with a most violent rigor. However, it is next door to impossible to write a book of this kind without making some omissions, and taken as a whole the book is wonderfully complete. The chapter on "Methods of Diagnosis" is particularly good, and Section 1018 should be in every practitioner's mind. It deals with the Fallacy of Perspective, by which the old general practitioner is apt to assume that his patient suffers from some common disorder while the advanced student and the junior consultant assume that he suffers from a rare disease.

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[1] THE LANCET, August 4th, 1888, p. 212.

Mentone as a Health and Pleasure Resort. By D. W. SAMWAYS, M.A., M.D. Cantab. London: Bemrose and Sons, Limited. 1901. Pp. 104. Price 3*s.* 6*d.*—Dr. Samways confesses in his preface that there have been innumerable books written about the Riviera. During the last 30 years, however, few have been published owing possibly to the fact that in the case of visitors to that favoured land "the inclination to record their experiences and professions has died out under the soothing influence of the comfortable modesty which fears to attempt a task which others might better have done." His own book he wishes to be taken as an effort to overcome the undue domination of such modesty. Mentone, we think, needs no advertisement, and probably it was a much nicer place 30 years ago than now—that is to say, for people who like quiet combined with lovely scenery and sunshine. The two latter are still there, but probably most of the quiet has departed. In one important point the increase in size has been a benefit—namely, in improved sanitation. Anybody, however, about to visit Mentone will do well to read Dr. Samways's little book, for in it he will find a variety of information about a very charming place, and we are glad to find that the book commences with an interesting summary of the history of Mentone. The municipality has set an example which is to be commended to all municipalities. Within the limits of the commune neither piano-organs nor beggars are allowed. Would that London were so blessed. The book contains neither index nor table of contents, omissions which might be rectified in a future edition.

Service des Enfants Trouvés de Notre-Dame de Péra. By Dr. SPIRIDION C. ZAVITZIANO. Constantinople: The Annuaire Oriental and Printing Company, Limited. 1901. Pp. 139.—Dr. Zavitziano, who holds a prominent position among the medical profession in Constantinople, has very decided views as to the up-bringing of children who have ceased to be under the protection of their parents and who have for some reason or other been transferred to the care of public authorities. He strongly opposes the practice of aggregating these children in large institutions of any kind, such as schools, asylums, hospices, or whatever name they may be called by, and he maintains that in default of parental care the only hope for these waifs lies in a system of boarding-out (*placement familial*); in the case of young infants the foster-mothers must be wet-nurses. He has had many years' experience of this work, for since 1889 he has been in medical charge of the foundlings maintained by the Greek Church of Notre-Dame in Pera, and in the present treatise, which is dedicated to the memory of his father, Constantine Zavitziano, a teacher in the Académie Guilford in Corfu, he gives full details of the methods adopted. From June, 1889, to the end of 1900 the number of children who came under his observation was 344 and his statistics show a mortality that compares very favourably with the mortality among foundlings in some other places.

The Law of Bills, Notes, Cheques, and I.O.U.'s. By JAMES WALTER SMITH, Esq., LL.D. London: Effingham Wilson. 1901. Pp. 172 and Index. Price 1*s.* 6*d.*—This is one of Mr. Effingham Wilson's excellent series of Legal Handy Books and is a clear statement of the matters mentioned in the heading. It is a legal maxim that ignorance of the law is no excuse and it is therefore just as well for the average man to have some knowledge of the law dealing with exchange of money. This little book will help him to such knowledge.

Cordingley's Dictionary of Stock Exchange Terms. By W. G. CORDINGLEY. London: Effingham Wilson. 1901. Pp. 96. Price 2*s.* 6*d.*—Stock Exchange terms are of necessity somewhat of a mystery to those who have not been admitted to the arcana of the "House," but Mr. Cordingley's work clears up the meaning of such terms as Bull, Bear, Contango, Grangers, and the like. We also find explanations of the meaning of Coras, Doras, Floras, and Noras, and we can imagine the Stock Exchange Musical Society having on its programmes a song with a chorus of "My Coras, My Noras," on the lines of Eugene Stratton's "Susie, my Toosie." On page 42, *sub. voc.* Floras, we find the following: "A term used ..... for the Three per Cent. Preferred Converted Ordinary Stock of the Caledonian Railway to distinguish them from 'Noras' which is used to represent the Deferred Converted Ordinary Stock." "Noras" is evidently a misprint for "Coras." We do not find, moreover, any explanation of the term "Agio," which is possibly not now used on the Stock Exchange, although it will be in the recollection of readers of "Vanity Fair" that poor old John Sedley after his failure used to talk in the dreary coffee-house about "agios and Rothchilds and Baring Brothers."

The Revised Twentieth Century Phrenology. By JOHN WILLIAM TAYLOR. Morecambe: J. W. and G. Taylor. London: L. N. Fowler and Co. Pp. 250. Price 3*s.* 6*d.*—This is a book which, according to an advertisement slip which we found within it, is "One of the Greatest Achievements of the Nineteenth Century!!!" We are glad to be told this, for we should never have thought it. Phrenology is a "science" in which we cannot believe. We wonder whether Mr. Taylor amongst other beliefs holds that the inhabitants of these islands are the Ten Lost Tribes? We are led to ask this, for on page 82 we find the following: "We are under no more obligation to teach the doctrine of *combativeness, destructiveness,* and so forth, because our predecessors believed in them than we are bound to eat grasshoppers, beetles, &c., because our Jewish ancestors feasted on these insects."

The A-1 Cookery-book. By "H. N. L." London: Simpkin, Marshall, Hamilton, Kent, and Co. 1901. Pp. 172. Price 2*s.* 6*d.*—Of cookery-books there seems to be no end, but there is no doubt that good cookery is conducive to good temper and therefore to good health. "H. N. L." has produced an admirable work so far as it goes. She does not profess to teach the higher branches, but her recipes are sensible, and if—it is a great "if"—a cook will only follow them by the light of common sense the result will generally be good. "H. N. L.," however, takes too much for granted—e.g., in her recipe for dry curry she talks airily about "one or two fowls, or rabbits, or pork, or any other tender meat." Now fowls and rabbits vary in size. For this dish she recommends a tablespoonful of curry powder. In the recipe for ordinary curry she lays down three tablespoonfuls of powder for one pound of steak, while in the recipe for curry powder (p. 146) she again recommends one tablespoonful of powder to the pound of meat. These three recipes taken together are confusing. The recipe for curried veal, again, has a different set of proportional parts given, being further complicated by the introduction of curry paste. Apart, however, from these little inaccuracies the actual directions for cooking are sound.

The Literary Year-book and Bookman's Directory, 1901. Edited by HERBERT MORRAH. London: George Allen. 1901. Pp. 415. Price 3*s.* 6*d.*—The edition of this book of reference for 1901 is constructed upon the model of last year, but it is hinted that certain modifications are shortly to be made. We do not envy the editor if one of these modifications should turn out to be the application of any rigid principle of selection to the directory of authors. Exactly whom the title of author may comprehend must always be a matter of doubt. The Society of Authors recognise for admission to their roll all who have written a book, and though the number of persons thus qualified for the title is very large we do not see how any other limits can be laid down.

Consequently we may fairly expect to see the portion of the "Literary Year-book" which forms "A Directory of Authors" grow in size, and that to such an extent as to preclude any idea of adding to the writers' names the titles of their best known works. In the case of well-known authors such an innovation would be unnecessary; in the case of the rank and file of authorship the information would not be widely interesting. Of the introductory essays which form the first part of the book the most readable are the editor's preface and summary of the past year's work and an essay on the book sales of 1900 by Mr. Frank Rinder. An article upon literary agreements is ill-informed. The pitfalls of the commission system and the chicanery possible under the half-profit system are not properly revealed in it. The royalty which an author might fairly expect to receive under the royalty system goes unmentioned. This is the more surprising because the publication of books in general is apparently not being discussed under the royalty system, but only that of novels and books of short stories, concerning which there must surely be an accepted principle or, at least, an ideal price for the author to aim at and the publisher to give—or to resist. Moreover, it is incorrect to speak of "all self-respecting books—books, that is, issued at the publisher's risk." It may be that a novel nowadays has to be very bad before it fails to obtain publication by one or other of the numerous publishing houses; but novels are only a branch of literature, and not the most important branch by a long way. Much admirable serious work which can have, and can be expected to have, only a limited sale is not produced at the publisher's risk, as all scientific societies and scientific men know. The utility of a good book of reference is impaired by the dissemination of the fallacies contained in this article.

Analytical Records
FROM
THE LANCET LABORATORY.

PURE GRAPE BRANDY.

(WILSON AND VALDESPINO, LIMITED, 5, NEW LONDON-STREET, LONDON, E.C.)

WE have drawn the attention of the profession on previous occasions to the importance of employing genuine brandy—that is, a matured grape spirit—for medicinal purposes. Undoubtedly corn, maize, or other cereal spirit differs very materially therapeutically from grape spirit, and differential chemical analysis offers to some extent an explanation. Matured wine spirit invariably contains volatile compound ethers which have their origin in the fermentation of the grape. These ethers are absent in corn spirit. The curious ethers of wine not only exceed the stimulating effects of alcohol, but they impart that fragrance and bouquet which are the especial characteristics of cognac (fin champagne)—characteristics which are singularly missing in the so-called cognac brandies now upon the market. The falling off in the quality of French brandy has, of course, arisen from the destruction of vineyards in the environment of Cognac by the phylloxera and the consequent recourse to the distillation of foreign wines and the blending of the spirit obtained therefrom with spirit derived from some source which, whatever it may be, is not the grape. There is no reason now, however, why the French growers should not re-establish their great reputation, and already parcels of brandy from the Cognac district, we learn, are being exported which are the produce of the newly planted vine. But only time can be relied upon to make the production mature. In the meanwhile excellent grape spirit, and therefore true brandy, may be obtained from Spain, where, though the phylloxera has similarly made an appearance, it has not been on such a disastrous scale. The specimen of brandy before us is a product of the Spanish grape and very excellent brandy it is, recalling very closely, if not indistinguishably, the characters of real old cognac. It contains a complement of the ethers of wine, as will be seen from the following analysis: alcohol, by weight 45·55 per cent., by volume 53·24 per cent., equal to proof spirit 93·21 per cent.; extractives, 0·366 per cent.; acidity reckoned as acetic acid, 0·012 per cent.; ethers in terms of alcohol, 3·63 parts per 10,000. The amount of ethers attains the maximum compared with a great number of brandies that we have examined. The spirit is excellent in all respects and is mature, fragrant, and mellow. It is said to be 12 years old. It cannot be too widely known amongst medical men that excellent brandy of this type may be obtained which is infinitely better than a great deal of the French brandy now upon the market. The time has come, it seems to us, when the word "brandy" should have a definite legal meaning, applying exclusively to spirit distilled from grape spirit. The word "cognac" of course is not necessarily an assurance of grape spirit, for throughout Germany that word is applied to all "branntwein," which it is confessed has a very remote relationship, if any at all, to vintages.

(1) EXTRACT OF BEEF; AND (2) SOLUBLE BEEF.

(ARMOUR AND CO., 8 AND 9, KING-STREET, WEST SMITHFIELD, LONDON, E.C.)

The extract of beef gave on analysis the following results: moisture, 19·99 per cent.; mineral matter, 22·10 per cent.; and organic matter, 57·91 per cent. The total nitrogen was 8·05 per cent., which, employing the factor 6·25, would represent 50·37 per cent. of proteids. Treatment with alcohol, however, showed 11·44 per cent. of meat bases. Further examination showed the presence of acid albumins, albumose, and some peptone. The preparation makes a very palatable "tea" which is both appetising and nutritious. The soluble beef gave the following results on analysis: moisture, 23·53 per cent.; mineral matter, 17·09 per cent.; and organic matter, 59·38 per cent. The total nitrogen amounted to 8·85 per cent., which, multiplied by the factor 6·25, would yield 55·31 per cent. proteid, thus accounting, with the exception of 4 per cent., for the whole of the organic matter. Alcohol only extracted 1 per cent. of the organic matters. The preparation contains albumins and albumose but no important quantity of peptone. It contains the nutrient rather than the stimulant principles of beef. Both preparations afford a palatable soup or "tea" of fresh, beefy flavour.

ROYAL INSTITUTION.—The following are among the lecture arrangements at the Royal Institution after Easter: Dr. Allan Macfadyen, six lectures on Cellular Physiology, with special reference to the Enzymes and Ferments; Professor Dewar, three lectures on the Chemistry of Carbon; Professor J. B. Farmer, two lectures on the Biological Characters of Epiphytic Plants; and Mr. J. Y. Buchanan, three lectures on Climate, its Causes and Effects. The Friday evening meetings will be resumed on April 19th when a discourse will be delivered by Professor J. J. Thomson on the Existence of Bodies Smaller than Atoms.

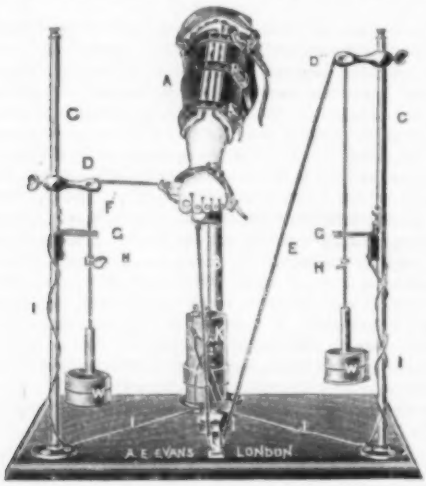
PORTHCAWL CONVALESCENT HOME.—The annual meeting of the subscribers to this institution was held on March 19th under the presidency of the Bishop of Llandaff. The report stated that 795 patients had been admitted during 1900, including 28 children, being 78 more than in 1899. The average number of days each patient remained in the home was 17 and the total cost for each, including salaries and general expenditure, amounted to 16s. 2d. per week. The new children's wing was opened last August at a cost of £2910.

New Inventions.

A MACHINE FOR APPLYING "RESISTANCE" EXERCISES IN DEFORMITIES OF THE FEET AND ANKLES.

I HAVE found the apparatus which is shown in the accompanying figure to be of great use in the treatment of all those conditions of the foot and ankle in which it may be desirable to strengthen any muscle or group of muscles, as in all forms of talipes and in flat foot and in-ankle. The apparatus consists of a padded trough A (supported by a pedestal B) in which the thigh and knee of the patient are securely strapped. Two side pillars C, C, carry pulleys D, D, which can be shifted up and down as necessary and over which run cords E and F, each of which is attached to a weight W at one end and fastened at the other end to a strap which goes round the fore part of the patient's foot. In cases of varus or valgus in which it is desired to strengthen the abductors or adductors respectively, only one pulley and cord and weight are employed. That to the inner side of the foot is used for varus and that to the outer side for valgus. A third pulley fixed to the base-board of the apparatus is used for equinus when it is desired to strengthen the dorsi-flexor muscles of the ankle.

As it is difficult to induce young children to carry out these exercises, which they do not find amusing in themselves, I have added a dry cell K, and an ordinary electric bell with insulated wire circuits I, I, to the two side pillars.



Each circuit is broken at the metal contact-makers G, G, which take the place of the familiar bell-push. When the weight is lifted, G, G are acted upon by the adjustable stops H, H, which press the leaves of the contact-makers together and close the circuit, whereupon the bell rings and continues to ring until the weight is allowed to fall. The temptation to ring the bell and to keep it sounding at will is one which few children can resist and it becomes a treat to be allowed to use the exerciser. It is employed as follows. The patient is seated on a chair contiguous to the thigh-piece and the thigh and knee are securely fixed. The strap is secured round the front of the foot and the appropriate cord is fastened to it. The screw on the stop H is loosened and the stop is slid upon the cord until it reaches the desired spot where it is fixed. This should be in such a position that it will press against the contact-maker G, when the weight is lifted high enough and the desired amount of movement is done. In the figure the cord F is arranged as for a case of varus, while the cord E is arranged as for the treatment of equinus. If it be desired to use the machine to strengthen the calf muscles, as in a case of talipes calcaneus, both cords are to be used and both side pulleys raised up as high as they will go, but the middle pulley on the base-board is of course not used. It is in cases of congenital talipes and in flat foot that this exerciser is most useful. In infantile paralysis it is only useful to strengthen any muscles which are not palsied completely but only paretic.

The apparatus is well made and is supplied at a reasonable price by Mr. Albert Evans of Oakley-crescent, City-road, London, E.C.

E. MUIRHEAD LITTLE, F.R.C.S. Eng.,
Surgeon to the National Orthopædic Hospital, London.

A HOSPITAL CHART.

WE have received from Messrs. Reynolds and Branson, Briggate, Leeds, a form of chart which has been in use in Dr. T. Churton's ward in the Leeds General Infirmary for two years. It shows the pulse and respiration rates in the same space by means of dots and connecting lines for the pulse and crosses for the respiration rate. The proportional figures (pulse : respiration as 4 : 1) are in parallel columns, so that an abnormal proportion is detected at a glance. The chief use of the chart is the instantaneous perception of the ratio existing between the temperature, the pulse, and the respiration. Spaces for recording the quantity and the specific gravity of the urine, and particulars of diet and drugs are ruled at the foot of the chart. With these additions its dimensions are eight inches by 10½ inches.

A MODIFIED CLOVER'S INHALER.

MANY who have been accustomed to administer ether with the ordinary Clover's inhaler will have had some experience of the inconvenient tendency which the reservoir has to become separated from the face-piece during administration. This is especially liable to occur when for some reason the patient has to assume the lateral or semi-prone position. I have had a slight modification made in the apparatus which prevents this detachment taking place. A projecting rim A is fixed round the lower margin of the reservoir. In this rim there is a slit opposite the O through which the upright portion of the indicator B passes. This portion of the indicator is curved so that it hooks over the rim as soon as the reservoir is turned on the face-piece. The reservoir is thus firmly fixed and cannot be separated from the face-piece

until the indicator again points to O. The modification has been carried out for me by Messrs. Mayer and Meltzer of Great Portland-street, W., and can be adapted to the ordinary apparatus at a small cost.

CHARLES HERBERT THOMPSON, M.D. Dub.,
New Cavendish-street, W. M.R.C.P. Lond.

THE LANCET.

LONDON: SATURDAY, APRIL 6, 1901.

The English Census.

THE eleventh census of England and Wales has just been taken. For the last nine months active preparations with this object in view have been in progress at Somerset House, and so far as the mere counting of heads is concerned the procedure was practically completed on the evening of Monday last. The alarm with which the earlier proposals to number the people of England were received by them and by Parliament has in these later days well-nigh subsided under the influence of education. At the opening of the twentieth century we are not called upon to allay the fears which prevailed very generally a century since to the effect that an enumeration would be used as a basis for new taxation or even for conscription, or, worse still, that the numbering of the people would betray the inability of England to furnish a due supply of soldiers and sailors for the protection of our native land. Neither are we asked nowadays to combat the opposite form of alarm—namely, that the people are increasing so rapidly as to outstrip the means of subsistence. With few exceptions people have at length come to realise the fact that they are not counted every ten years out of idle curiosity, but in order that the Government of the country may be carried on and laws framed according to indications which can only be known when the population of the various districts has been accurately determined. During the last few weeks the public have been carefully instructed through the agency of the daily press, and apparently from official sources, concerning the purposes for which a national census is required, and quite recently the Registrar-General has published an appeal to the heads of families throughout the country for their assistance in rendering the present census as correct as circumstances will allow. So that we may look forward to the census of 1901 being especially valuable because the returns are likely to be more reliable than any similar returns previously made.

To our own profession, and especially to that branch of it which is engaged in the study and practice of State medicine, the accurate taking of a census is a matter of the very highest importance. That this is the case will readily appear from the following considerations. In the first place, population is the only basis upon which rates of birth, sickness, and death can be calculated. England and Wales have been parcelled out into administrative sanitary areas, both urban and rural, over which areas elective boards are appointed with definite powers and responsibilities. It is essential for the due performance of their statutory duties that these authorities should possess the means of measuring with a near approach to accuracy the prevalence from time to time of preventable sickness and also of mortality in the several areas within their jurisdiction. The Local Government Board, as regards both the Public Health and the Poor-law departments, are particularly interested in securing an accurate return of the numbers living in the various (some 2000) sanitary areas of England and Wales, as well as in the registration districts and sub-districts, which are more numerous still. The supervisory duties of the Board under the Vaccination Acts must be much lightened by an appreciation of the figures to be dealt with. That the returns of the census should be as accurate as possible is matter of scarcely less concern to the Factory Department of the Board of Trade which, under the able guidance of a medical chief, is now doing admirable sanitary work among the workers in factories and workshops throughout the country. To that department it is essential that the fluctuations of the population engaged in certain injurious or dangerous trades should be accurately known between one census and another. The uses to which Dr. WHITELEGGE has applied even the scanty information of this kind hitherto at his disposal will be appreciated by those who are familiar with the highly instructive reports for the last few years of the Chief Inspector of Factories.

The recent extension to the country generally of the Act for the compulsory notification of certain dangerous infectious diseases is a cogent reason why the population of the various administrative areas concerned should be ascertained with great precision and even with greater precision than is possible with the help of only a decennial census. A return to a sanitary authority or to the Local Government Board to the effect that a certain number of cases of some epidemic disease—say, of diphtheria—had occurred in a given district within a stated period of time would be meaningless without the complementary statement of population which alone enables us to form a judgment of the proportional prevalence of the disease. And if the population is incorrectly estimated the ratio of sickness will, of course, be equally incorrect. In point of fact, this recent extension of a most valuable sanitary enactment furnishes a strong argument for the establishment of a quinquennial census for England and Wales at least as complete as that now obtaining in the metropolis. All competent authorities are agreed as to the necessity of a numbering of the people once in every five years, and there are many reasons for wishing that in the year 1906 the quinquennial census of London should be extended to the remainder of England and Wales.

The Ethnological Significance of Burial Rites.

IT is well known that the excavations of M. DE MORGAN and Professor FLINDERS PETRIE in the prehistoric cemeteries of Egypt are believed to have shown that one or more new primitive races inhabited the Nile valley of different ethnological relationship to the people we ordinarily speak of as the ancient Egyptians. The reason for considering that these more lately discovered relics indicated new or alien races was the completely divergent method of sepulture, for in these extremely ancient interments, instead of the bodies being carefully preserved by mummification, they were deposited in three different manners, all apparently entirely opposed to mummification.

In one of these the skeleton was found with the knees drawn back to the sternum, the hands pressed to the face, and the whole skeleton compressed into the smallest possible dimensions and placed in a trench in the desert sand; in a second the skulls were removed from the spinal column, and the complete set of bones of one or more persons, bearing traces of having been scraped to remove the flesh and of having been submitted to some process tending to preserve them, were carefully packed together in a tomb; and in a third the body—perhaps the skeleton only—had been burnt together with some of the funeral offerings. These systems of sepulture, apparently so contrary to mummification as to indicate an entirely different race of people, have now been instanced by M. BAILLET, in an article in the Journal of the French Archæological School at Cairo, as proving a similar idea for the preservation of the defunct to that which later produced the perfection of mummification as known to the historic Egyptians.

M. BAILLET'S method of reasoning, based entirely upon the statements of the most ancient and therefore least corrupted religious texts, is well founded and is interesting to all studying the history of mankind. M. BAILLET, after considering the three prehistoric burial systems, concludes that the methods of all were produced by the pre-eminent desire to preserve and to perpetuate as far as possible the remains of the defunct. In the first case the placing of the compressed skeleton, after removal of the flesh, in the smallest possible compass in the desert sand, in some cases after anointing the bones with bitumen or such like substances, tended to prevent the remains from being disturbed by beasts of prey who would have sought it for the flesh. In the second case, where the bones were separated, the object in view was the same, only more fully carried out. The skeleton having been broken up more entirely to remove all particles of flesh and sinew, the interior contents of the skull, which might have given rise to putrefaction and hastened the decay of the bones, were got rid of, and the bones completely anointed or filled with bitumen or resinous substances. In the third case he points out that the incineration did not take place upon a funeral pyre in the open air, in which case the remains would have been dispersed and lost, but in a confined tomb where the ashes remained carefully preserved as long as the sepulchre remained intact. At this point it may be noted that mummification itself was not really a preservation of the flesh of the deceased but practically a removal of parts and a desiccation of parts, for, as HERODOTUS tells us, in its perfect attainment the result achieved was the dispersion of the flesh, leaving practically nothing but skin and bones. As is well known, all the viscera as well as the contents of the skull were removed as preliminaries to embalmment because of the increased tendency to putrefaction if they remained, and the Egyptian rituals for mummification themselves state distinctly that it was to prevent putrefaction that the process was carried out. The great sacred work known as the "Book of the Dead" also shows this: chapter 14 is entitled "That the body may not be corruptible"; chapter 71 is entitled "To repulse corruption"; chapter 173 is entitled "To prevent any damage to the corpse and to preserve the flesh and bones"; chapter 154 treats "of preventing the decomposition of the corpse." Beyond this texts in the "Book of the Dead" tell that by mummification more of the cadaver is to be preserved than formerly, thus indicating a recollection of the inferior, more primitive processes and showing the advance that had taken place in the art of mummification. The second book speaks of the deceased as arriving in the next world having had his flesh embalmed so that his actual body will not decay, "*his companions have put aside his flesh*; his flesh will not become evil"; and again addressing the defunct it says, "Thy flesh accompanies thee, there is no corruption for thee, no vermin; thy head and neck have not been broken; thy tongue has not been removed nor thine eyebrows shaved; no evil has been performed upon thy cadaver which shall not now perish." The expression in italics is quite contrary to the assertion as to the preservation of the flesh, from which M. BAILLET argues that it is a piece of a rubric of the older version of the text when the flesh was removed and the skull and the bones were separated, and that the scribe, not understanding its meaning, had permitted it to remain part of the volume which vaunted that these acts had been dispensed with. Many texts show that the Egyptians attributed their success in at length preserving the semblance of the body by mummification to the use of baths and unguents which dissolved or dried up the decomposable constituents, and also to their marvellous system of bandaging with wrappings prepared with certain preservative solutions. To the populace the priests gave out that the flesh of the departed was preserved, but to the initiated it was known that the majority of its constituents were dissipated by the processes which it underwent, hence in the same inscriptions upon the tomb pyramid of PEPI we have such apparently contradictory assertions as "the bones of PEPI are as of iron, the flesh of PEPI as the indestructible stars," and again, "deliver the defunct from the flesh that was in him."

All the funeral processes of Pharaonic times had but one object—to insure the non-decomposition or purity of the body, because by that means, it was imagined, only could the spirit's existence be perpetuated. The incense and natron offerings, fumigations, and libations at the annual funeral feasts were all but copies of the provisions that had been made after death for the preservation of the corpse and were intended annually to renew their efficacy. Even the sarcophagus was but a replica of the great natron bath in which the body had been steeped. Before these means of obtaining the object of preservation had been perfected the dryness of the desert sand had been relied on and the body had been compressed to preserve its form intact. Then preservation had been attempted by cutting or burning the tissues away, the remnants being carefully anointed and covered with resin or bitumen. In course of time a way was invented of destroying the corruptible matter without damaging the external form. The skull was embalmed through a fracture in the ethmoid bone instead of being decapitated. The viscera were removed to prevent decay, but were placed in four canopic vases in the tomb. The flesh withered away beneath the skin which was protected by bandages, the thickness of which restored apparently the proper proportions of the body. All through the ages of Egyptian history the aim of funeral

rites was similar, so that the procedures may have been the actions of but one single people, that mysterious race of which Professor OWEN concluded that they may have been autochthones of the Nile valley.

A Case for Publicity.

THE financial position of most of the London hospitals is as a rule insecure. That is to say, the funded property produces far less income than is required to meet the expenses to which the institution is yearly put, and the balance has to be defrayed by voluntary contributions, reaching the charity either directly from subscribers and testators, or indirectly in the shape of grants from funds such as the Metropolitan Hospital Sunday Fund, the Hospital Saturday Fund, and the Prince of Wales's Hospital Fund for London. Moreover, as the population of London increases the stress put upon the hospitals becomes greater, while the lists of subscribers do not lengthen in proportion. This being so it is of the utmost importance that a hospital should not dispose of any valuable property which it may possess, particularly if that property is of a nature that is bound to appreciate, without very full and free discussion having taken place upon the matter.

We are led to these remarks by three letters which have recently appeared in our columns—namely, one from "A Governor of the Hospital," which was published in THE LANCET of March 9th, p. 739, another from "Hospital Governor," in THE LANCET of March 23rd, p. 893, both dealing with the affairs of the Royal Orthopædic Hospital, and a third in THE LANCET of March 30th, p. 971, from the secretary to that institution. This hospital, as may be known to some of our readers, occupies a very valuable site, having a frontage both to Oxford-street and to Hanover-square. The site is the freehold property of the charity. It appears that the Managers of the Prince of Wales's Hospital Fund for London at one time recommended the sale of the site, and the committee of the hospital in June, 1899, having the same view, wished to sell the property for the sum of £28,000. The subscribers to the charity, however, disagreed with the committee, who were defeated upon the question being put to the vote mainly by the efforts of Mr. H. H. MARKS, the present chairman of the hospital. Mr. MARKS, it is alleged, acknowledged that he obtained his majority by votes specially created for the purpose of resisting the scheme for selling the site of the hospital. The committee accordingly resigned and a new committee was formed with Mr. MARKS as chairman. This committee, at a meeting held on Feb. 18th, 1901, received full permission to sell the site and to buy another. A description of the meeting will be found in THE LANCET of Feb. 23rd, p. 591. On March 14th a meeting of the committee was held at which, according to the letter from "Hospital Governor," an offer of £37,700 for the site was brought forward without previous notice. "Hospital Governor" gives an account of the meeting the accuracy of which is challenged by the secretary of the hospital. The secretary does not state in detail with what statement he finds fault, but we do not understand that the essential fact that it has been voted by the committee to accept the offer of £37,700 is denied. Now £37,700 represents £1300 at 29 years' purchase and is a good price to obtain for land in most places. But Oxford-street and Hanover-square afford positions of simply incalculable value. At the meeting on Feb. 18th it was said that the value of the site was £45,000, or £1500 at 30 years' purchase, and every decade the property will continue to rise in value—if precedent is to be relied on in the least. Mr. MARKS's position requires explanation. Having, as we understand admittedly, turned out a committee which was preparing to sell the site of the hospital for £28,000, he is now, as chairman of the committee, ready to sell that site at £7300 below a valuation which has been attributed to himself, and that without bringing forward any reasons to show why the sale is necessary at all. For surely an asset of increasing value should not be sold without an urgent reason. Something must have occurred to change Mr. MARKS's mind, for quite recently, we believe, the hospital was put into thorough sanitary repair at a cost of some £2000, an expense that surely would not have been incurred if it was intended to evacuate the building in a few months.

We are in no way wishful to dictate to the hospital authorities how they should dispose of their property, but we think that without doubt the matter deserves thorough ventilation and that the disposal of such a valuable site should not be decided upon hastily. It may not be necessary, or even financially sound, for a charitable institution to occupy a site which so far as either frontage is concerned might be filled by first-class business premises, but surely it is the duty of those responsible for the administration of the charity to see that a good bargain is made if the premises are vacated. We do not know where the authorities propose to obtain their new site, but presumably it would be somewhere where land is less expensive. Surely this could be managed without the sale of their valuable freehold by borrowing money, even if it is deemed advisable to leave the building with which they have been long associated and upon the sanitary needs of which they have just spent a large sum. We cannot see that there is any hurry in the matter. The committee are not pressed for time in their anxiety to catch the top of the market, for freehold property in Oxford-street is not in the least likely to go down in value, while the offer which they are preparing to accept is 15 per cent. below the sum which has been estimated as the right sum. "Hospital Governor" says that an offer has been made to lease the Hanover-square end of the property at £1200 a year. If this is so, why have not this and similar alternatives been discussed? Discussion is all that is wanted. The committee are acting, it is understood, in accordance with the views of the Prince of Wales's Hospital Fund for London. The public has a right to know upon what those views are founded, for it is the public who will be painfully pleaded with to find the income if the Royal Orthopædic Hospital squanders its capital. The secretary of the hospital protests against the premature discussion in the press of business under conduct by hospital committees. We join in the protest, only asking, When is discussion premature? Surely it will be too late for practical purposes to debate the policy of selling the site of the hospital after the sale has been effected.

Annotations.

"Ne quid nimis."

STATE LUNATIC ASYLUMS IN INDIA.

THE Secretary of State for India has sanctioned a scheme for five large central asylums for the insane in India. Hitherto in India there have been only a number of small asylums under the care of the civil surgeons of the stations where they were situated, who make, of course, no claim to special familiarity with psychological medicine, and whose time is fully occupied by the ordinary claims of their position. We trust that men of proved knowledge in psychological medicine will be appointed to the superintendence of these asylums; and that it is the intention of the Government to attract suitable candidates is shown by the fact that special rates of pay are to be given. The salaries will range from 600 to 1400 rupees per month, so that the pay will be about 50 per cent. higher than full regimental pay in the Indian Medical Service, with a house thrown in and leave to conduct a private consulting practice. The appointments will be open to, though not restricted to, officers of the Indian Medical Service, but inasmuch as a knowledge of native language and customs will be of immense value to the superintendents of the new asylums it is probable that the appointments will fall to members of the Indian Medical Service who can prove their fitness for the berths. The existence of highly-paid scientific appointments like these should induce young men with a taste for psychological medicine to enter the service and those who have had the practical experience of a sojourn of a year or two in a first-class asylum at home should have a strong claim for an appointment. As time goes on the number of these asylums will probably increase and they may become valuable clinical centres, for in India at the present moment there is not a single private asylum or any facility for learning psychological medicine. The five new asylums will be situated at Bishanpur for Bengal, at Agra for the North-West Provinces, at Lahore for the Punjab, at Poonah for Bombay, and at Madras. The asylum at Lahore has been completed, that at Agra is under construction, while the existing buildings at Madras, which are very good, will be utilised.

MEDICAL AND SURGICAL APPOINTMENTS TO THE KING.

A FURTHER list of medical and surgical appointments to the King appears in the *London Gazette* of March 29th:—To be Physicians in Ordinary to His Majesty: Sir William Henry Broadbent, Bart., K.C.V.O.; Sir James Reid, Bart., G.C.V.O., K.C.B.; and Sir Francis Laking, K.C.V.O. To be Physicians Extraordinary to His Majesty: Surgeon-General Sir Joseph Fayrer, Bart., K.C.S.I.; Sir Richard Douglas Powell, Bart., K.C.V.O.; Sir Edward H. Sieveking, Sir Felix Semon, and Dr. John Lowe. To be Physician to His Majesty's Household: Sir Thomas Barlow, Bart., K.C.V.O. To be Honorary Serjeant-Surgeon to His Majesty: Mr. Frederick Treves, M.V.O. To be Honorary Surgeons in Ordinary to His Majesty: Mr. Thomas Bryant, Mr. Alfred Downing Fripp, M.V.O., and Mr. Rickman John Godlee. To be Surgeon to His Majesty's Household: Mr. Herbert William Allingham. To be Surgeon-Apothecary to His Majesty and Apothecary to His Majesty's Household: Sir Francis Laking, K.C.V.O. To be Honorary Surgeon-Oculist to His Majesty: Mr. George Anderson Critchett. To be Honorary Surgeon-Dentist to His Majesty: Mr. Henry Bell Longhurst. To be Dentist to His Majesty's Household: Mr. Edwin Thomas Truman. To be Honorary Anæsthetist to His Majesty: Dr. Frederick William Hewitt. To be Chemist and Druggist to His Majesty: Mr. Peter Wyatt Squire. To be Surgeons-Apothecary to His Majesty's Household at Windsor: Mr. William Fairbank and Dr. William A. Ellison, jointly. To be Surgeon-Apothecary to His Majesty's Household at Sandringham: Dr. Alan Reeve Manby, M.V.O. To be Honorary Physicians in Ordinary to His Majesty in Scotland: Sir William Tennant Gairdner, K.C.B., and Dr. George William Balfour. To be Honorary Surgeons to His Majesty in Scotland: Dr. Patrick Heron Watson and Dr. Alexander Ogston. To be Honorary Surgeon-Oculist to His Majesty in Scotland: Dr. Douglas Argyll Robertson. To be Physicians in Ordinary to His Majesty in Ireland: Sir John Thomas Banks, K.C.B., and Dr. William Moore. To be Honorary Surgeons to His Majesty in Ireland: Sir Philip Crampton Smyly and Sir William Thomson. To be Honorary Surgeon-Oculist to His Majesty in Ireland: Dr. Charles Edward Fitzgerald. It will be remembered that in our issue of March 2nd we published the following list:—To be Sergeant-Surgeon in Ordinary to His Majesty: Lord Lister. To be Honorary Sergeant-Surgeons to His Majesty: Sir William MacCormac, Bart., K.C.V.O., and Sir Thomas Smith, Bart. To be Honorary Physicians: Dr. D. McKwan, Inspector-General (retired); Sir James J. L. Donnet, K.C.B., Inspector-General of Hospitals and Fleets; Sir John Watt Reid, K.C.B., Director-General of the Medical Department of the Navy (retired); Dr. A. B. Messer, Inspector-General of Hospitals and Fleets (retired); Dr. H. C. Woods, M.V.O., Inspector-General of Hospitals and Fleets. To be Honorary Surgeons: Sir James Jenkins, K.C.B., Inspector-General of Hospitals and Fleets; Mr. Timotheus J. Haran, Inspector-General of Hospitals and Fleets; Sir James N. Dick, K.C.B., Director-General of Medical Department of the Navy (retired); Dr. William H. Lloyd, Inspector-General of Hospitals and Fleets; and Dr. Alfred G. Delmege, M.V.O., Deputy Inspector-General of Hospitals and Fleets. This, we believe, completes the list. Many of these gentlemen have previously held similar appointments either to the King (when Prince of Wales) or to her late Majesty Queen Victoria, while some of the appointments are new. The position of Honorary Anæsthetist to His Majesty, which has been given to Dr. Hewitt, is, we believe, an entirely new office created by His Majesty.

THE SCIENTIFIC PRODUCTION OF MILK ON A LARGE SCALE.

WE have already alluded to the satisfactory steps which are being taken in this country by large dairy companies to supply not only pure and sterile milk but milk also standardised for special purposes. Milk as a source of disease is well known and its chief danger is its extreme liability to become infected with the tubercle bacillus. The conditions under which the production of milk is carried on are gradually passing from the old rule-of-thumb method to the scientific methods of the present day. This change, it may be remarked, does not only secure the production of milk of a non-infective character but it has also brought greater economy into the methods and results. One of the largest examples of an enormous milk-supplying station in which the production of milk is dealt with scientifically on the score both of hygiene and economy is the establishment of Herr C. Bolle in Berlin. From particulars recently furnished to us by Sir Otto Jaffe, who has studied the question of milk-supply in a number of towns at home and abroad, we learn that Herr Bolle started his business in the year 1871 when he distributed 500,000 gallons of milk, whereas at the present day he supplies milk at the rate of 7,000,000 gallons to about 50,000 families. The milk is all sent out from one central station. The firm supply milk, cream, milk from a special farm for infants,

sterilised milk, kefyr, machine-skimmed milk, butter-milk, butter, and cream cheese. In this great central station there are a bacteriological laboratory, a chemical analytical laboratory, and a chemical technical laboratory. In 1899 over 30,000 tests were made in the chemical analytical laboratory alone, and over 1500 guinea-pigs were used in the bacteriological laboratory, mostly for tests of tuberculosis. In the chemical technical laboratory experiments are made upon the by-products of milk which are utilised. Special officers are retained for supervising the 130 farms with their 14,000 cows which supply the central establishment, and the duty of controlling and observing the health of the cows is in the hands of four veterinary surgeons. Till a few months ago the firm passed the greater part of the milk which they collected from the various farms through filters of sterilised gravel which freed the milk of many of its impurities, destroyed many micro-organisms, and tended to keep the milk sweet. Within the last few months, however, they have made arrangements for using an improved Pasteurising process for the whole of the milk which they receive with the exception of that which comes from one of their own farms, and they consider this to be one of the most important improvements that they have adopted since the opening of their establishment. They maintain that this process interferes neither with the taste nor with the chemical composition of the milk, but destroys any pathogenic microbes such as those of diphtheria, scarlet fever, typhus fever, and particularly tuberculosis. The entire establishment, which includes butter, cream, and cheese manufacture on similarly scientific lines, covers more than five and a half acres. The steam-engines develop about 400 horse-power. The cooling plant is able to produce about 20 tons of ice a day. It is stated that the rapid growth of this industry has been accompanied with an excellent effect upon the general milk-supply of Berlin; in 1879 14·1 per 1000 of the samples investigated by the police authorities were adulterated and in 1886 only 3·6 per 1000. The infant mortality per 100 living born children in 1871 was 30; this fell in the next 10 years to 27·1 and in 1899 it fell to 23·4. Even if it is also admitted that many other influences have contributed to the decrease of infant mortality undoubtedly the improved milk-supply has had much to do with it. The facts speak eloquently in favour of the scientific preparation and supply of milk and milk products.

THE SALE OF "DRINK" TO CHILDREN.

MR. CROMBIE spoke truly when he stated that his Bill to prevent the Sale of Intoxicating Liquors to Children has the approval of the country. The tendency of popular opinion with regard to this question has been frequently manifested in the press and on the platform. Once more it has found emphatic expression in a vote on the second reading of this Bill passed by a substantial majority of 318, which represents the collective decision of all parties in the legislature. This measure, it may be added, is the result of no sudden movement of the national mind. A Royal Commission has already proved that the public-house exercises a mischievous influence on young children sent thither to fetch liquor and that drinking habits are thus engendered even at so early an age. The only argument adduced so far in favour of this practice appears to be that it suits the convenience of working parents. The contention obviously rests on the slightest foundation. The publican and the workman have under almost any circumstances an unequalled facility in accommodating one another. Convenience of this kind attends every hour of the working day and it acts too often as a serious impediment in the course of business. Less of such convenience would prove rather a gain than otherwise. In any case it cannot be allowed to stand as a reason why children—who, as Mr. Crombie reminded us, constitute the hope of the country in its international struggle for existence—should be contaminated by a ruinous habit at the very outset of life. Amendments in committee may be looked for, but we trust that they will not be allowed to impair the vitality of this wholesome and useful measure.

A MEDICAL MAN'S GENEROUS LEGACY.

THE Corporation of Portsmouth has just received under the will of the late Mr. George Scale, a sum of £20,000 to provide annuities for the blind. Applicants must be over 30 years of age and necessitous. The amount of each annuity is fixed at £30, so that at least 20 blind persons will benefit by Mr. Scale's bequest. Mr. Scale was for many years, as was his father before him, a medical practitioner in Portsmouth where he practised in the Commercial-road. The father died some 20 years ago and the son, who died recently, retired from practice in 1872 owing to blindness. Since his retirement he has resided at Emsworth. He never recovered his sight but his bequest shows that he was ever mindful of those who were afflicted in a like manner.

THE RICHMOND WATER-SUPPLY.

THE Town Council of Richmond, Surrey, have always been very anxious to have an independent water-supply and they have taken a great deal of trouble and incurred great expense in the matter. At the time of Lord Llandaff's Commission the council protested that their district ought not to be placed under any new body which might be entrusted to carry on the duties of managing the water-supply of London. Last year Mr. Mansergh was asked to make a report as to the nature of the existing works of the corporation and as to their efficiency, and he was further requested to make suggestions for the improvement or enlargement of the plant, and to recommend the best available method for increasing the supply of water. The present works he found to consist of wells and of a brick tank situated in Petersham meadow. Of the wells one is sunk through the London clay into the chalk which is reached at 254 feet below the surface. From this well a boring which varies in size from two feet to seven inches passes downwards to a total depth of 1446 feet. Another well which has a depth of 320 feet passes for 30 feet into the chalk. From the bottom of this well headings have been driven to the well previously described and in various other directions. These headings are six feet in height, four feet six inches in width, and their total length amounts to no less than 10,400 feet. In addition to this borings have also been made below the headings in many places where it was hoped that fissures might have been found. In spite of all this work the quantity of water which has been obtained has not exceeded 260,000 gallons per day. With a view to discover the cause of the deficiency of the water and to what extent the chalk in the district around was similarly depleted Mr. Mansergh made a series of inquiries in regard to wells which existed in the neighbourhood. It was found that in the case of a well situated two miles to the north of Richmond the water-level had sunk about 68 feet during the last 50 years. In the case of another well three miles to the north-east the level of the ground water had sunk 72 feet since the year 1877. Records were given of six wells and in every case the water-level had sunk to some extent. Mr. Mansergh gave it as his opinion that the cause of the lowering of the water-level at Richmond was due in part to the pumping which had taken place there; that from the chalk around also an excessive amount had been removed by pumping; and that the amount of the rainfall during the last few years had been insufficient to make good the

amount taken. The supply from Petersham meadow is derived from a brick tank 15 feet in depth into which the water from the meadows is conducted by means of a double line of stoneware pipes which are laid open-jointed and covered with a layer of screened gravel and sand. The water from this source has been open to the suspicion of pollution and a specimen of it was therefore sent to Dr. Klein for analysis. Amongst other things his report stated that he found specimens of proteus vulgaris and bacillus coli. In summing up the results of his examination Dr. Klein said that the water was not in a satisfactory state and that it contained a fair number of microbes which must be considered as having been derived from the surface soil. According to a report in the *Thames Valley Times* of Feb. 13th, 1901, Dr. Klein, in answer to further questions which had been addressed to him by a member of the Richmond Town Council, said that even this water was better than that supplied by the Southwark and Vauxhall Water Company. The state of the water supplied from Petersham well has led Mr. Cockram of Richmond to address to us a series of letters with regard to the pollutions which he considers are a great source of danger in the water obtained from the meadows. We are informed that many anglers are accustomed to assemble on the banks of the Thames between Buccleuch House and Ham House, and that they spread decomposing animal and vegetable matter on the towpath and act generally in a manner which is liable to cause pollution to the surface of the meadow itself. It seems that this part of the bank of the Thames has a peculiar fascination for anglers, and the *Fishing Gazette* often contains somewhat long reports in regard to their proceedings. Prizes are given to the most successful anglers and occasionally their number is to be reckoned by hundreds of gentlemen who are stationed at intervals over a course of nearly three miles. An enormous number of prizes is given and we have been favoured with a list of those which were to be awarded as the result of a monster competition held towards the end of last year. On this occasion the *Fishing Gazette* stated that the rain was "almost intermittent," but we are not quite clear as to whether this was a favourable climatic condition for the sport. Angling has always been a favourite pursuit with a great many people who live in the East End and in other parts of London, and it is the only out-of-door recreation which is enjoyed by a very large number of people. It is an extremely good thing for them that they are able to obtain healthy amusement in this way at a very small cost, for the railway companies convey them at specially cheap rates. It is to be hoped that in future the anglers will take care not to do anything which may cause danger of pollution to the Petersham meadows, and we have no doubt that should our contemporary the *Fishing Gazette* point out to its readers the great hardship which some anglers have inflicted on the people of Richmond they will make arrangements which will obviate the possibility of any future annoyance.

THE NITROPROPIOL TEST FOR SUGAR.

IN a recent number of the *Münchener Medicinische Wochenschrift*, Dr. Franz von Gebhardt of Budapest describes this test for sugar in the urine by means of orthonitrophenylpropionic acid. The reduction of this substance by sugar was pointed out by A. Baeyer in 1880.[1] Messrs. Tausch of Ehrenfeld, a suburb of Cologne, have for some time been supplying tablets in which orthonitrophenylpropionic acid is compressed with sodium carbonate. The test by means of these tablets was described in THE LANCET of Feb. 17th, 1900, p. 471. According to these makers the method of testing for sugar is to dissolve a tablet in 10 cubic centimetres of water, add 10 drops of the saccharine solution or urine to be examined, and boil the whole gently for from three to four minutes. If sugar be present the entire solution assumes an indigo-blue colour, and, if it is allowed to stand, indigo insoluble in water separates out and collects at the bottom. At one of the clinics connected with Budapest University, Dr. von Gebhardt has for a considerable time used nitropropiol tablets in testing for sugar. Instead of following the method recommended by the manufacturers, he does not begin by dissolving the tablet, but he takes from 10 to 15 drops of the saccharine solution or urine to be examined, adds 10 cubic centimetres of distilled water, and then the tablet, and warms the whole gently for from two to four minutes. If sugar be present the solution becomes at first greenish and then dark indigo blue. Dilution of the saccharine solution keeps the reagent always in excess with respect to the sugar, otherwise the reduction with formation of indigo blue does not occur, but indigo white is formed instead and the solution remains colourless. If the proportion of sugar is very small the fluid to be examined need not be diluted. It often happens that the blue colour does not come out with sufficient clearness, in which case he adds chloroform and shakes; the chloroform takes up the indigo and forms a blue layer at the bottom. Dr. von Gebhardt has satisfied himself by many experiments that sugar is the only constituent of the urine that gives this blue reaction. The colouring matter of the bile, uric acid, albumin, blood, phosphates, kreatinin, and glyconic acid do not produce the effect. The reaction succeeds with saccharine urine in presence of minute amounts of albumin, pus, or blood, but the boiling must be longer than in the absence of these. If the proportion of albumin is larger it must be removed by shaking with chloride of sodium or chloroform before the application of the test. The following drugs taken by persons whose urine is free from sugar do not cause the urine to give the reaction: benzoic acid, chloral hydrate, carbolic acid, guaiacol, iodine, rhubarb, salicyl compounds, senna, and turpentine. As regards the sensitiveness of the reaction 30 milligrammes of dextrose dissolved in 100 grammes of water and not further diluted gave a blue colouration; 25 milligrammes in the same quantity of water gave a green colouration instead of blue; 50 milligrammes in the same quantity of water gave a reaction even when 10 drops of the solution were added to 10 cubic centimetres of water. Dr. von Gebhardt further points out that the reaction is simple, rapid, and inexpensive, that it requires no chemical except the tablets, and that it may be performed with only a few drops of urine.

[1] Bericht der Chemischen Gesellschaft, xiii., 2260.

THE BOSTON RURAL DISTRICT COUNCIL AND ITS MEDICAL OFFICER.

THE position of a medical officer of health to a small district is not altogether a pleasant one. He is almost sure to come into conflict with sundry existing interests, that is to say, if he does his duty, and the owners of the said interests not unnaturally feel hurt. The Boston (Lincolnshire) Rural District Council held its monthly meeting on March 16th and decided by a majority of one vote to advertise for a medical officer, the term of appointment of the holder, Dr. Arthur Tuxford, expiring on March 25th. Mr. Clarke, who proposed that the post should be advertised, explained that he, with many more, was not satisfied with Dr. Tuxford, and Mr. Brown seconded the motion. Mr. Eley, however, moved as an amendment that Dr. Tuxford should be reappointed, and Canon Staffurth, in seconding the amendment, pointed out that although Dr. Tuxford's report was somewhat disheartening, yet it was better that they should know the truth as to health matters.

Mr. Eley pointed out that a medical man, if conscientious and sincere, was bound to make enemies. The council, however, as we have said, decided to advertise the post. It is quite evident that the report of the medical officer is the *casus belli*, and an examination of that document makes matters plain. We see that in the district of Skirbeck many houses drain into cesspools; others drain into sewers which open into a stagnant ditch by the roadside. Others, again, drain into "Bargate drain" which has numerous houses on its banks. We may here explain that "drain" in the fens does not generally mean an underground sewage channel, but a water way cut to drain the fen lands. These drains naturally have a very sluggish current and the Bargate drain in question is little better than an open sewer. Out of 11 cases of typhoid fever which occurred in the district during the year 1900 seven occurred in Skirbeck, all of which were in houses along the course of Bargate drain or in its immediate vicinity. The isolation hospital is also severely condemned, and with good reason. The building is an old farm-house; there are no lavatories, all excreta having to be carried through the house, and the drainage, such as it is, is into cesspools in the garden. A new building is, therefore, recommended. It is quite obvious from this report that a great part of the Boston rural district has sanitary arrangements of a most defective character. Dr. Tuxford has pointed this out; therefore he was, if not actually dismissed, at all events not allowed to be re-elected without a contest. The election was held on March 30th and Dr. Tuxford was re-elected. We are eminently glad to see that the matter has adjusted itself in this way. As Mr. Brown, who seconded the motion for advertising the post, remarked at the meeting on March 16th, "We'll take and have the matter brought before the board and then we shall know who comes, and then we can elect the right party which we believe we have a right to elect." Well, the right party has been elected and we congratulate the board. It would have been a disgraceful thing had Dr. Tuxford been able to say with the masterful Hildebrand, "I have loved righteousness and hated iniquity; therefore I die in exile."

A SOLDIER'S EYES.

SIR FREDERICK MAURICE, the general officer commanding the Woolwich District, has called the attention of the officers, non-commissioned officers, and men serving under him to a form of blindness which, he says in plain terms, is a more prolific source of disaster to soldiers than that blindness which the ophthalmic surgeon can treat and of which the presence can be detected with the result that the person afflicted with it is at once removed from the service. Sir Frederick Maurice refers to want of observation of the common objects of every-day life—a want which affects the efficiency of the soldier in barracks and which may some day bring him and his comrades to disaster in the field, and in his order to the troops under him the general commends to all ranks the practice of observation at all times and seasons. With breezy directness and simplicity he gives instances. Buckets are hanging up all round a room and the non-commissioned officer in charge at the moment when they are required has never observed that they are there, or a military policeman who is asked why he is allowing some irregularity replies with evident candour, "I beg your pardon, sir, I did not see it." The unobservant soldier, Sir Frederick Maurice points out, is not merely useless in the army, but is actually dangerous, and the general trusts to his officers to practise and to inculcate the use of faculties which all possess, but the exercise of which can only be made habitual by constant and intentional use. We wish Sir Frederick Maurice well in his efforts. To a great extent the facility of observation, like other forms of independent thought, is destroyed by military discipline in our army. In the barrack-yard a soldier must keep his eyes to the front unless ordered to direct them elsewhere, and the soldier in garrison towns performs most of his exercises in the barrack-yard. As a result, the ease with which soldiers of the mother country could lose themselves was a constant cause of comment and ridicule by colonials during the early part of the present war, while one of the stories published of De Wet tells how that elusive leader one night led his men straight through a British camp which barred his way, answering questions in English, and having no objection raised to his progress except by an officers' mess, the members of which grumbled because their meal was suffering from the dust raised by the fugitive Boers. Such a story, if true, affords a good instance of want of observation, when to observe would have implied an interference by the observer in that which apparently did not concern him. The want of observation, however, is not a peculiarity of soldiers, though military discipline may encourage it rather than otherwise. It is to be encountered in all ranks of society at large. The medical man meets with it frequently in his practice in persons who have failed to notice in those around them, even in those towards whom they bear some measure of affection, symptoms which a little mental alertness, coupled with a little sympathetic interest in the affairs of others, would at once have shown to them. Children often suffer thus owing to the want of observation on the part of their parents. In every-day life, moreover, it is not considered quite "good form" to be actively observant. The person who habitually notices to any considerable extent things which do not strictly concern him is, if detected, considered an inquisitive and impertinent person, while children are corrected if their natural desire to observe becomes obtrusive. Sir Frederick Maurice appeals to his officers to consider themselves always on duty in order to acquire and to teach habits which can only be acquired by those always on duty in respect of them, and Major-General Baden-Powell in his work on scouting teaches the same lesson. We have suggested some of the causes, psychological rather than physical, which prevent it from being easily learnt and acted upon, and we commend the study of Sir Frederick Maurice's order to others as well as to those to whom it was issued. The necessity for the constant practice of observation by all who are entering the medical profession, at every stage of their training and career, we need not enlarge upon.

THE TEMPERATURE OF WORKSHOPS.

THE Factory and Workshop Act of 1895 orders (Section 32) that in every factory and workshop adequate measures shall be taken for securing and maintaining a reasonable temperature in each room in which any person is employed. A dressmaker was recently summoned under this section and was proved to have kept a number of young women at work in a temperature of 50°, 55°, and 51° F., as shown by the thermometer on three occasions on which the factory inspector called. The room was a large one, with two fireplaces—a provision which showed that the original builder had recognised its requirements; but some frugal person had blocked up one of the fireplaces and in the other only an asbestos stove was used. The magistrate was satisfied that the Act had been infringed and no doubt he felt sympathy with young women compelled to do needlework in such a temperature, for the recent weather has brought home the discomforts and dangers of cold to most of us. He, however, thought it only necessary to order that the room should be brought into conformity with the Act within six months, subject to a penalty of £1 a day should his order not be complied with. Why six

months should have been allowed we confess ourselves unable to understand. If the order had been that, subject to the penalty named, the room should be properly warmed within 48 hours we have no doubt that means would have been found without inordinate expense to raise the temperature by 10 degrees or failing this that the assistants would have been provided with a proper room elsewhere.

POST-GRADUATE STUDY IN THE METROPOLIS.

IT is satisfactory to hear that the association of nine of the metropolitan schools of medicine for post-graduate teaching is fulfilling a want that has been felt for many years. It is evident from the steady increase in the number of tickets issued that practitioners are finding it worth their while to spend seven guineas on a three months' course, or even 10 guineas on a six months' course, including, as it does, the enormous clinical material of nine of the large London hospitals, utilised to the best advantage for the purpose of instruction by so many leading physicians and surgeons of the metropolis. No doubt it is a great attraction to the scheme that anyone who is taking up a particular subject can follow the practice and the teaching of that subject at each of the nine different hospitals and so compare the methods of well-known authorities. A considerable number of colonial and American practitioners are being attracted by the courses.

THE BRITISH CONGRESS ON TUBERCULOSIS.

THIS congress, which has for its aim the prevention of consumption and other forms of tuberculosis, is to be held in the Queen's Hall, London, from July 22nd to July 26th inclusive, under the patronage of His Majesty the King. The President is not yet appointed, but among those holding office as chairmen of councils or committees are Sir William Broadbent, Professor T. Clifford Allbutt, Sir James Crichton Browne, Sir James Blyth, the Right Hon. the Earl of Derby, and Lord Avebury. The sections are four in number: a State and Municipal Section, of which the President is Sir Herbert Maxwell; a Medical Section, President, Sir R. Douglas Powell; a Pathological and Bacteriological Section, President, Professor G. Sims Woodhead; and a Veterinary Section, President, Sir George Brown. The State and Municipal Section will be divided as follows. In the first division will be considered statistical matters; in Division II. the Notification of Tuberculosis; in Division III. the Influence of Housing and Aggregation (these two divisions will be taken together); in Division IV. the Control of Milk and Meat Supplies; and in Division V. the Provision of Sanatoria. Two distinguished foreigners are expected to take part in this section—namely, M. Henri Monod and Dr. A. J. Martin. In the Medical Section a discussion will be opened on July 23rd upon Climatology by Dr. C. Theodore Williams and Dr. I. Burney Yeo. On July 24th there will be a discussion upon the Therapeutics and Diagnostic Value of Tuberculin in Human Tuberculosis, to be opened by Dr. Heron, in conjunction with the Pathological Section. On July 25th a discussion will be opened by Professor Allbutt upon Sanatoria for Consumption. Demonstrations are announced upon cases of Skin Tuberculosis and their Treatment, and of the Use of Roentgen Rays in Diagnosis. The discussion in the Pathological Section will be as follows:—On July 23rd: "The Morphological and Physiological Variations of the Bacillus Tuberculosis and its Relations (*a*) to other 'acid-fast' bacilli, and (*b*) to the ray fungus and other streptothrices." To be opened by Dr. Alfred Moeller, Dirig. Aerzt der Heilstätte, Belzig, bei Berlin, and Dr. William Bulloch, bacteriologist and lecturer on bacteriology and general pathology to the London Hospital. On July 24th: "The Tissue-changes and Constitutional Effects Produced by the Various Constituents of Tuberculin." This will be a joint discussion in common with the Medical Section, to be opened by Professor Koch. On July 25th: "The Varieties of Tuberculosis (Morbid Anatomy and Histology)." To be opened by Professor Dr. C. Benda, Urbankrankenhaus, Berlin; Professor Sheridan Delépine, professor of pathology, Victoria University (Owens College), Manchester; and Professor D. J. Hamilton, professor of pathology, University of Aberdeen. On July 26th: "Mixed Infections in Tuberculosis." Amongst others who are expected to take part in the work in this section are Dr. Roux and Professor Metchnikoff, of the Pasteur Institute, Paris. In addition to the papers on the above subjects the secretaries are prepared to receive papers on other points in the pathology of Tuberculosis, which will come on for discussion after the official subjects have been disposed of. The Veterinary Section will deal with such important matters as the Diagnosis of Tuberculosis in Animals during Life (on July 23rd); Tuberculosis and the Milk-supply (on July 24th); Tuberculosis and the Meat-supply (on July 25th); and (on July 26th) the Legislative and other Measures necessary to Combat Tuberculosis amongst Animals. In addition to the work of the sections described above the following public addresses will be given to the whole congress: on Tuesday afternoon (the 23rd) by Professor Koch of Berlin; on Wednesday afternoon by Professor Brouardel of Paris; and on Thursday afternoon by Professor McFadyean of the Royal Veterinary College. The official languages a the congress are English, French, and German. The honorary secretary-general is Mr. Malcolm A. Morris, 20, Hanover-square, London, W. There will be a museum in connexion with the congress divided into a Pathological and Architectural Section. The honorary secretary for Section I. is Dr. W. Jobson Horne, 27, New Cavendish-street, W., and for the Architectural Section Mr. T. W. Cutler, 5, Queen-square, Bloomsbury, W.C.

BACTERIOLOGY AND THE MERCHANDISE MARKS ACT.

IF, as the progressive study of bacteriology seems to teach, fine bacteria make fine flavours, some difficulty may arise as to the proper description of certain goods. It is now well known, for example, that the flavour and aroma of a Havana cigar are due to the operations of a specific microbe during the fermentation of the leaf. Now if a culture of this pure specific microbe be taken and a German leaf be infected with it a cigar may be obtained which is indistinguishable even by connoisseurs in regard to quality and character from the Havana-grown production. How would such a cigar be properly described? This possibility must be seriously considered, for already a patent has been granted in connexion with the use of pure cultures of bacteria for the purpose of favourably influencing the fermentation of tobacco. Thus pure cultures of bacteria from fine West India tobacco have been prepared and transferred to inferior German tobacco in course of fermentation. The flavour of the German tobacco was so greatly improved that it was no longer recognisable as such even by connoisseurs and experienced smokers of the native leaf. Since a specific microbe is productive of the special flavour of the Havana cigar it would not be strictly correct to describe a continental cigar infected with the self-same microbe as containing an unnatural flavour. The flavour, though artificially induced, would be one quite normal and natural to tobacco. Nevertheless the cigar would not be a Havana cigar, although chemically and even from the connoisseur's point of view it was indistinguishable from it. In the same way a specific character may be induced in

cheese by sowing it with a special organism. At one time Roquefort cheese was only produced in the village of Roquefort. Now it is produced on a large scale elsewhere, and the cheese so obtained is indistinguishable from the original Roquefort cheese simply because it is sown with the self-same organism which produces the well-known green growth of mould in that cheese. In actual practice bread is allowed to become covered with a luxuriant growth of mould and is then dried and ground, the resulting powder being strewn between the separate layers of the sliced curd. Cheese prepared in this way, though identical for all practical purposes with Roquefort, would be falsely described as Roquefort, that is, as produced in Roquefort. Gorgonzola, Brie, and Stilton could be encouraged to mature in a similar way, though the curd may have been produced hundreds of miles from the original celebrated districts. Again, the creamy flavour of butter is known to be due to a specific organism which has been employed with success in producing a butter of excellent and uniform flavour when formerly it was difficult to secure this attractive quality always. It is clear that as our knowledge of the secrets of nature such as we have described increases, the names of places made famous by the production of a specially excellent article will cease to have a specific meaning for that article. When the microbes of Havana, of Gorgonzola, and of Devonshire (or other celebrated butter-producing districts) come to be successfully cultivated on the large scale the rest is only a matter of infection in order that an article formerly exclusively associated with the names of these places may be produced identical with the native production. It is possible that distinctive flavours are associated with certain centres of production because at these centres the specific organism producing these flavours finds there a congenial environment. Once, therefore, this organism is discovered a monopoly of manufacture and fame would be seriously threatened.

THE EPIDEMIC OF PLAGUE AT ALEXANDRIA IN 1899.[1]

DR. VALASSOPOULO, the head physician of the Greek Hospital at Alexandria, has written a most interesting account of the plague epidemic which prevailed in Alexandria in 1899, commencing at the end of April and reaching its decline towards the end of July. The first case which Dr. Valassopoulo saw was admitted under his care in the Greek Hospital on May 2nd. Although the symptoms were characteristic of plague yet the bacteriological results were not quite decisive. Fifteen days later, however, a second case was admitted showing similar symptoms in which the bacteriological tests were quite conclusive, and Alexandria was therefore officially declared to be plague-infected on May 20th, 1899. It should be mentioned, however, that Dr. Valassopoulo recalls having attended a case at the beginning of April in which there was inguinal bubo with pyrexia. This, in the light of the two other cases, is now looked upon as having been plague. Of these three patients two were grocers' assistants and the third lived in a room attached to a bakery. Dr. Valassopoulo does not arrive at any definite conclusion as to how the disease was imported, but he has no hesitation in affirming that it was spread by rats, and he mentions that in one grocery-store there were found within a few days 200 dead rats and a dead cat. Dr. Valassopoulo divides the cases under his care into two classes only—namely, plague accompanied by external buboes and plague without external buboes. The first form he calls "bubonic plague" and the second "visceral plague." In all he treated 24 cases of undoubted plague, 22 of which belonged to the bubonic form and two to the visceral form. Of the 24 cases 16 patients recovered and eight died. Of these eight deaths seven were cases of bubonic plague and one of visceral (pneumonic) plague. With regard to the methods by which infection is spread Dr. Valassopoulo wisely keeps an open mind. As out-of-the-way instances of infection he cites the case of a young girl who suffered just previously to her menstruation with pruritus vulvæ and apparently was infected through the labia minora which were made raw by scratching; of a man who was probably infected by the pharynx and had enlarged supra-clavicular glands; and of a small boy with an axillary bubo who had a crack in his hand at the junction of the left thumb with the palm. Treatment resolved itself into the general treatment of infectious fevers. Buboes were incised when suppuration appeared and in the case of deep fluctuation being felt in the iliac fossa this collection of pus was let out under the strictest antisepsis. Eleven cases were treated with a curative serum obtained from the Pasteur Institute, of which four patients died and seven recovered. With regard to preventive inoculation as advised by Mr. Haffkine, Dr. Valassopoulo was unable to try it on account of the hostility of the populace, but he considers that it is of use in prophylaxis. The methods of prophylaxis upon which Dr. Valassopoulo relied were the usual ones of isolation both of patients and "contacts," with disinfection of houses, the cleansing of insanitary areas, and the destruction of rats. We have but mentioned the salient points of this report, but we congratulate Dr Valassopoulo upon having written a very clear and practical account of the epidemic.

[1] La Peste d'Alexandrie en 1899, au Point de Vue Clinique, Epidémiologique, &c. Par le Dr. A. Valassopoulo, médecin-en-chef de l'Hôpital Grec d'Alexandrie. Paris: A. Maloine, 1901.

THE OUT-PATIENT TREATMENT OF INCIPIENT MENTAL DISORDERS.

THE committee of the Dorset County Asylum, at the suggestion of Dr. P. W. Macdonald, the medical superintendent of the County Asylum, Dorchester, have approved of the establishment of an out-patient department at the asylum "to afford an opportunity of consultation, free of charge, to those suffering from mental diseases and kindred affections, especially in their incipient stage." This is a wise provision, tending to the saving of patients from threatened mental breakdown. A department of this kind has been in existence at the West Riding Asylum, Wakefield, for nearly 10 years. In London Dr. Henry Rayner has long had an out-patient clinic for mental disorders at St. Thomas's Hospital. Both of these institutions have, we believe, achieved a considerable measure of success in this special line of medical work. The London County Council have had this important matter under consideration and it is hoped that some practical good may come of it. The adequate treatment of incipient and unconfirmed cases of insanity affords one of the few means at our disposal for dealing with the problem of the increase of insanity. The general practitioner and the family physician see such cases as a matter of course before they come within the survey of the alienist and the establishment of mental clinics for out-patients both at our asylums and hospitals generally would be a great saving of time. The special treatment of the patient would commence much earlier. But provision will have to be made so that this form of medical charity may not be abused. The Dorset County Asylum Committee state that no one is to be deemed eligible for consultation and treatment at their institution except persons of the poorer class who reside in the county of Dorset and whose symptoms are, in the opinion of the medical superintendent, of such a nature as to require advice and treatment of the special character available at the asylum. Persons desirous of availing themselves of such conditions must procure a recommendation on a prescribed form from a medical practitioner, or from a justice of the peace for the county,

or from a member of the county council, and must attend on a specified day at the out-patient department of the asylum. In Germany out-patient clinics for mental cases are in existence in connexion with nearly every asylum and university and in the United States progress is being made on the same lines, and if we desire to be free from the reproach that we are slow to advance in the field of psychological medicine the establishment of such out-patient departments in our country must become more general.

THE MIDDLESEX HOSPITAL LODGE OF FREEMASONS.

A MASONIC Lodge has been founded in connexion with Middlesex Hospital, and its consecration will take place on Tuesday, May 7th. The officers named in the warrant are T. J. A. Burns, M.R.C.S. Eng., as Worshipful Master; W. Duncan, M.D. Brux., F.R.C.S. Eng., as Senior Warden; and F. J. Wethered, M.D., F.R.C.P. Lond., as Junior Warden. Mr. Henry Morris, F.R.C.S. Eng., will, we understand, be the Treasurer. This is the third Masonic Lodge that has within recent years been founded in connexion with the great London hospitals, the other two being the Rahere Lodge associated with St. Bartholomew's and the Sancta Maria Lodge with St. Mary's. The Middlesex Hospital Lodge starts under good auspices and will, we trust, prove as successful as have the Rahere and the Sancta Maria Lodges. Particulars concerning the new lodge can be obtained by Freemasons connected with the hospital from the secretary, Mr. F. Clare Melhado, Middlesex Hospital, W.

THE CENSUS AND THE MEDICAL PROFESSION.

SEVERAL correspondents have written to us pointing out in somewhat expostulatory terms that although the Registrar-General gives explicit directions to the clergy and to the members of the legal profession yet he ignores the existence of the medical profession. We think, however, that a little consideration of the subject will show our correspondents that the Registrar-General has reason on his side. The legal profession is subdivided into barristers and solicitors, while articled clerks and other clerks have a recognised place in it without forming an integral part of it. In the case of the clergy again there are bishops, priests, and deacons of the English Church, of the Roman Church, and of the Orthodox Eastern Church, though we fancy that in the last case there is no bishop resident in these islands, and there are many sub-classes of nonconformity. If a man describes himself on the census paper simply as "priest" or "deacon" he gives rise to confusion. But the medical profession is one. A man passes certain examinations which give him the right to be enrolled upon the Medical Register. Being there he is entitled to describe himself as a medical practitioner and no one else should have such a right. Our correspondents would join us in warmly resenting the inclusion of quacks.

SALINE INJECTIONS IN MYALGIA AND SCIATICA.

AT the meeting of the Société Médicale des Hôpitaux of Paris on March 8th, M. Bernard reported that he had obtained very encouraging results from saline injections in lumbago, pleurodynia, and sciatica. In one case a man had suffered from sciatica for six years. The disability was absolute, the pains were very acute, and the insomnia was constant. The first night after the injection the patient slept well, the improvement continued, and at the end of a fortnight he was free from all pain and could walk easily. Three months after the cessation of treatment the improvement was maintained. In more than 20 cases of sciatica, some of which were very severe and attended by almost complete disability, the greater number of the patients were much improved in two or three days, and almost completely cured in a period varying from eight to 20 days. Equally satisfactory results were obtained in pleurodynia and myalgia. In a case of muscular rheumatism the patient, who had been treated without benefit for six months, lost both pain and disability after he had received two injections. The procedure consists in injecting five cubic centimetres of normal saline solution at the most painful points. In some cases three or four injections were given on the same day.

THE STOURPORT MEDICAL ASSOCIATION AND THE KIDDERMINSTER MEDICAL SOCIETY.

DR. R. SAUNDBY has received the following letter from the honorary secretary of the Kidderminster Medical Society with reference to that body and the Stourport Medical Association:—

"DEAR SIR,—I have to inform you that the Stourport Medical Association have amended their rules in such a way as to (1) prohibit canvassing; (2) confine their membership solely to the wage-earning classes; and (3) ensure that there shall be no funding of moneys to a greater amount than £100. The disabilities imposed by the Kidderminster Medical Society upon their medical officer have now been removed. I should be obliged if you would kindly notify the secretary of the Birmingham Branch of the British Medical Association of this fact.

"I am, yours very truly,
"O. C. PENRHYS EVANS,
"Honorary secretary Kidderminster Medical Society."

This would appear to announce the termination of a struggle in which the Birmingham and Midland Counties Branch of the British Medical Association gave support to the medical profession in Kidderminster and Stourport.

H.M. the King of Italy has been graciously pleased to promote Sir William Mac Cormac to the degree of Grand Officer of the Order of the Crown of that country. This is the second grade of the Order, the first being the Grand Cordon. It derives its name from the Iron Crown of Lombardy. Sir William MacCormac has been for many years consulting surgeon to the Italian Hospital in London.

SEVERAL daily papers have announced that Sir Dyce Duckworth has resigned his office of physician to St. Bartholomew's Hospital. This is an error and one that might seriously inconvenience its victim. Sir Dyce Duckworth has resigned his lectureship on medicine after 12 years' service, but he remains physician to the hospital.

THE King has approved of Deputy Surgeon-General Charles Benjamin Mosse, C.B., C.M.G., A.M.D. (retired), (Superintending Medical Officer), and Dr. John Pringle, C.M.G. (Member of the Privy Council), being nominated Members of the Legislative Council of the Island of Jamaica.

WE have received from the laboratory of the Scottish Asylums, 7, Hill-square, Edinburgh, two reports for the year 1900—namely, the report of the General Board and the fourth annual report by the pathologist, Dr. W. Ford Robertson. An extended notice will appear in due course.

THE inaugural meeting of the Society for the Study of Psychology by Experimental Methods will be held, by the kind permission of Dr. G. H. Savage, at 3, Henrietta-street, Cavendish-square, London, W., on Tuesday, April 16th, at 5 P.M.

BUBONIC plague at the Cape is, according to Dr. Gregory, principal Government medical officer, becoming more and

more virulent. On April 1st there were two fresh cases among Europeans and four among the coloured population.

AT a meeting of the Comitia of the Royal College of Physicians of London held on Monday last Sir William Selby Church, Bart., M.D., was re-elected President by the practically unanimous vote of the Fellows.

LORD SALISBURY continues to progress favourably. There has been considerable increase of strength. At no time were the wild rumours current in some quarters justified by the facts.

THE result of the election petition for Monmouth District Boroughs is that Mr. Frederick Rutherford Harris, M.P., L.R.C.S. Edin., has been unseated.

HISTORY OF RENAL SURGERY.

BY DAVID NEWMAN, M.D., F.F.P.S. GLASG.,
SURGEON TO THE GLASGOW ROYAL INFIRMARY.

IV.[1]

NEPHRORRHAPHY.

THE next operation called into requisition was first performed by Dowell of New Orleans who fixed the kidney by a tape suture in 1874,[2] but it was first called "nephrorrhaphy" by Hahn of Berlin, and afterwards named by the French writers "nephropexy." In 1880[3] I suggested stitching the kidney to the abdominal wall in a case sent to me by Dr. J. M. Yair of Kilcreggan, but it was not carried into execution till three years later.

The credit of introducing the operation to the profession belongs to Dr. E. Hahn who performed his first operation in April, 1881. He exposed the capsule of the kidney by an incision in the loin between the twelfth rib and the crest of the ilium, along the edge of the sacro-lumbalis muscle. The fatty capsule was opened along the outer border of the kidney, the perinephric fat was drawn into the wound, sutured to the fascia by half a dozen catgut sutures, and the wound was plugged with gauze. The first six nephrorrhaphies were performed by Hahn; then in Germany by Delhaes, Kuster, Esmarch, and Luenstein; in Italy by Bassini, in America by Weir, each one operation; and in this country the writer performed two nephrorrhaphies before the end of 1883. All these cases were successful. In the five years 1881 to 1885 35 nephrorrhaphies were performed with one death, and in the following five years (from 1886 to 1890) 139 with four deaths, which, considering the condition of many of the cases operated upon, is a very low mortality. The adoption of nephrorrhaphy in the place of nephrectomy for painful moveable kidney was a distinct advance. Up till 1886 excision was employed in the treatment of moveable kidney. Of 30 operations 21 patients recovered and nine died, a mortality sufficiently high to prevent extirpation being resorted to except in extreme cases where nephrorrhaphy had failed to give relief. The advantages are very evident. The mortality is in nephrorrhaphy one-tenth of what it is in nephrectomy. No renal tissue is removed; the operation can be performed on both sides and the peritoneum is not opened. As performed by Hahn the operation did not always permanently fix the kidney, but as it is now done little difficulty should be found in anchoring the organ in the lumbar region.

INCISION OF THE KIDNEY.

Incision of the kidney and division of the fibrous capsule for the relief of pain was first suggested by Tiffany of Baltimore in 1885 and demonstrated by him to be a successful operation in cases of so-called "nephralgia."[4] In this country Mr. Reginald Harrison[5] and the present writer[6] have employed incision of the kidney to relieve the pain and other symptoms arising from increased vascular tension of the renal tissue. Although the value of the operation has been verified by many others the importance of the treatment has not been sufficiently recognised as a means of relieving severe renal suffering and preventing suppression of urine.

RESECTION OF THE KIDNEY.

Resection of a kidney or partial excision was for a long time thought to be an extremely dangerous procedure, and even still few cases have been ventured upon, partly from fear of hæmorrhage during the operation but also from want of confidence that the wound in the renal parenchyma would heal satisfactorily. Tuffier[8] showed by his experiments upon animals that during the operation the bleeding can be easily controlled and that wounds of the kidney heal rapidly. Considering the very vascular condition of the organ this is to be expected. The first surgeon to perform a partial excision of the kidney was Czerny[7] who operated for an angio-sarcoma on the convex aspect of a kidney in November, 1887. The wound was partly sutured and partly tamponated. Two years later Kummell, and succeeding him Bardenheuer, Tuffier, and Bloch, performed partial resection of the kidney, and some of them more than once. Up to the present close upon two dozen such operations have been published and on the whole the results are very encouraging, although in a few instances the partial excision is required to be followed by a complete nephrectomy.

The conditions of the kidney most suitable for partial excision are maladies such as perinephric tumours and growths in the cortex of the kidney which are strictly localised or involve only a small portion of the organ. Out of 21 cases of perinephric tumours[9] in 14 the kidney was removed along with the growth, while in seven the tumour was simply excised from the fibrous capsule. Again, in benign tumours, when they can be diagnosed at the operation, a partial excision is indicated, and for certain cystic formations the same remark applies. The operation has also been resorted to in suppurative disease with or without calculus, in urinary fistula, and in tuberculous disease, but for these conditions it is not suitable. Injuries of the kidney have on many occasions been treated by this method and with a good result. Bardenheuer in Germany, E. Owen and Keetley in this country, and Dr. Nash in New South Wales have advocated its adoption. Dr. Arthur Barth gives a very full account of the process of healing in wounds of the kidney in von Langenbeck's *Archiv*.[9]

OPERATIONS ON THE URETERS.

Operations upon the ureters may be looked upon as a development of the last few years; indeed, previously to 1887 there were only two ways of treating a fistula arising from division of the ureter or an obstruction of the duct—to let it alone or to perform a nephrectomy. But it is of interest to note that Turner[10] gives the following quotation by Caspar Bauhine:—

> Of a section into the ureter, upon the like occasion, and I must own the only one I remember, there is notice taken by Joachim Camerarius (A.D. 1534-1598) of a nobleman so exceedingly tormented with a stone that had plugged one of his *ureters* and could not pass; when the surgeon at his earnest solicitation cut into the cavity of the belly, and, having got out the stone, healed up the wound, without any injury after ensuing.

Velpeau[11] mentions a case of a small calculus impacted in the right ureter three inches below the kidney where the posterior wall of the ureter was perforated by an ulcer, suppuration was set up in the adipose tissue behind the peritoneum, and an abscess extended from the level of the kidney to the floor of the pelvis. Velpeau maintained that the calculus could have been removed by an incision in the flank.

In his Hunterian Lectures, page 15, Mr. Morris remarks:—

> In 1856 a remarkable series of articles was published by Dr. C. Gigon of Angoulême (*L'Union Médicale*, Feb. 14th, 16th, 21st, 1856), in which he suggested opening the ureter with the object of establishing an artificial passage for the escape of urine in a case of calculous anuria. He called the operation he proposed ureterotomy, investigated the anatomical causes which determine the impaction of calculus in the ureter, gave an excellent description of the normal anatomy, and figured the natural dilatations and contractions in the lumen of the

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[1] Parts I., II., and III. were published in THE LANCET of March 2nd (p. 649), 9th (p. 726), and 23rd (p. 884), 1901, respectively.
[2] Annals of Surgery, xii., p. 87.
[3] Lecture on the Surgical Diseases of the Kidney, p. 87.
[4] THE LANCET, Oct. 17th, 1896, p. 1080.
[5] Transactions of the Clinical Society of London, vol. xxx., p. 65.
[6] Etudes Experimentales sur la Chirurgie des Reins, Paris, 1889.
[7] Beiträge zur Klinischen Chirurgie, 1890, Band vi., p. 511.
[8] Wagner, p. 114.
[9] Archiv für Klinische Chirurgie, vol. xlv., p. 1.
[10] Art of Surgery, London, 1725 vol. ii., p. 487.
[11] Surgery, edition of 1851, p. 1021.

ureter. He pointed out the intimate relation of the ureter with the peritoneum, and that it is the peritoneum which maintains the ureter in contact with the psoas magnus. This led him to explain the rationale of enforced walking exercise upon a calculus impacted in the ureter; the contraction of the fibres of the psoas he thought communicated to the ureter a sort of peristaltic action which made the stone descend towards the bladder.

He gave the explanation based on his anatomical knowledge and upon a post-mortem examination of a case in which he found a moveable right kidney opposite the third and fourth lumbar vertebræ, of the occurrence of hydronephrosis in association with moveable kidney. This, be it observed, was 42 years before the same explanation was credited to Landau, Terrier, and Baudoin respectively. He attributed it to kinking of the ureter, which, fixed by the peritoneum, cannot follow the kidney in its displacements, and thus causes it to form a curve with the convexity upwards, all the more pronounced as the kidney gets lower and lower. The result of this curvature, he thought, was to obstruct the urine, or even to render its flow impossible. Finally, he described the operations of ureterotomy and lumbar ureterostomy precisely as they are now performed. Gigon thought that the obstruction to the free flow of urine due to the kinking of the ureter was a predisposing cause of stone in moveable kidneys.

OPERATIONS ON THE URETERS FOR STONES.

Calculi which have become impacted in the ureter may now be removed, but the operative procedure depends upon the position occupied by the stone. 1. When the stone is sufficiently low down to be detected by digital examination in the vagina or rectum the stone may be removed through the bladder, the rectum, or the vagina. 2. When the stone is too high up to be felt by the finger, but occupies the middle third of the ureter, it must be removed by an incision through the abdominal parietes but without opening the peritoneum. 3. When the stone is in the upper third of the ureter the kidney should be incised and an endeavour made to extract the calculus through the renal pelvis.

Emmit, Berg, Richmond, Czerny, Sänger, and the present writer have removed stones from the lower end of the ureter in the female by dilating the urethra and the ureter. Ceci removed a calculus through the rectum and Fenwick employed a perineal incision. Removal through the vagina has been practised by Cabot, Emmit, Cotterall, Fenwick, and Reguey, and the writer has removed a stone from the ureter in two cases by suprapubic cystotomy. In 1887, through an incision in the lumbar region, Godlee performed a retro-peritoneal ureterotomy, and the same method was adopted by Kirkham and Torrey in 1889. Since then the method has been followed by Cabot, by Ralfe, by Finger, and by many others.

In operations through a wound in the lumbar region the ureter should be carefully searched, and if a stone be found it may in some instances be readily pushed up into the pelvis and removed by an incision through the convex border of the kidney. An incision through the substance of the kidney heals more readily than one through the wall of the pelvis. Supposing, however, that a stone is not found in the first examination with the kidney in its normal position the attachments of the organ must be freed and the organ brought out through the wound sufficiently to permit the surgeon making a thorough examination. When the hand fails to discover the presence of a stone an incision should be made through the kidney on its outer aspect, and through the wound a digital exploration of the pelvis and calices should be made, and if a stone is found it may be removed. After the stone is extracted a ureteral catheter or sound should be passed down the ureter into the bladder so as to ensure that the passage is clear. It is not uncommon to find calculi both in the pelvis and ureter. If a stone is discovered in the lumen of the duct an attempt should be made to press it up towards the kidney, and generally this is easily accomplished as the ureter is dilated above the point of impaction of the stone, but if it is firmly fixed an incision should be made through the wall to the ureter, and after the calculus has been extracted the incision may be closed by sutures.

Intra-peritoneal ureterotomy has been performed in two cases—one by Cullingworth and the other by Lane. The patient in the former case died and in the latter recovered, but on account of the danger of contaminating the peritoneal cavity the operation has not been recommended.

OPERATIONS FOR THE RELIEF OF KINKING, STRICTURE, AND VALVULAR OBSTRUCTION.

Simon[12] was the first surgeon who indicated the treatment of stricture and valvular obstruction by operation, and in 1890 Trendelenburg[13] attempted to relieve a large hydronephrosis by shortening the ureter and transplanting it from the side to the bottom of the sac. The result of the operation was uncertain and the patient died from ileus. The following year Kuster[14] attempted a very similar operation, but finding a stricture in the ureter abandoned transplantation for resection. The first successful case of ureterotomy for valvular obstruction of the ureter was performed by Fenger of Chicago in 1892[15] for hydronephrosis in a moveable kidney. The valve was divided and the ends were united by suture while the moveable kidney was fixed. He performed a second operation in the same year for cicatricial stenosis. In 1893 Mynter[16] also had a successful operation, and Morris, in his Hunterian Lectures at p. 20, describes a case of his own.

In many cases of moveable kidney the displacement of the organ leads to kinking of the ureter and transitory hydronephrosis, a condition which may be remedied by fixing the kidney high up so as to stretch and straighten the elongated duct. I called attention to this many years ago,[17] and since then I have operated successfully upon nine cases of transitory hydronephrosis in moveable kidney by the method just indicated. It is both safer and more successful than resection of the ureter in the cases referred to.

When the ureter has been divided by injury, or when a section is made for the purpose of remedying a diseased condition, the two segments may be joined or the upper portion of the duct may be implanted into the bladder, the vagina, the large and small intestine, or on the skin in the loin. These operations are being resorted to, not only in cases of stricture and wounds of the ureters for ulceration or sloughing around a calculus, but also in tumours of the bladder requiring resection of the organ and in ectopion vesicæ. When there is little loss of tissue so that the length of the duct permits of it the two segments should be reunited. This has been done in four different ways:—1. The transverse end-to-end method was first performed by Schopf[18] in 1886. Transverse wounds of the ureter tend to gape and there is considerable danger of stenosis at the point of union, but the advantage of this method is that there is no loss to the length of the duct. This operation has been performed 12 times.[19] 2. The oblique end-to-end method devised by Bovee has only been done once; the patient is still (1900) free from any symptoms referable to the urinary passages, four years after the operation. 3. The end-in-end operation devised by Poggi[20] from experiments upon dogs has been very successful. In this method the upper segment of the duct is invaginated into the lower segment, and if necessary the latter is split for a short distance. It has been performed nine times with one death. 4. The end-in-side implantation has been also employed to unite the cut ends of the ureters. The method was introduced by van Hook in 1893 and is as follows. The lower segment is closed at its upper end by a ligature, and a quarter of an inch below it a longitudinal incision is made twice as long as the diameter of the duct. In the upper segment a longitudinal incision is made beginning at the free end and extending upwards for a quarter of an inch. On the side of the upper segment, immediately opposite the slit, the two free ends of a suture are passed from within outwards, about an eighth of an inch apart and an eighth of an inch from the extremity of the ureter. The free ends are then carried through the slit in the lower segment and passed from within outwards half an inch lower down. When the suture is tied the open end of the upper segment is drawn into the slit in the lower segment. The walls may then be secured by fine sutures and enveloped in peritoneum. This method has been employed by Kelly, Emmit, Schanta, Doherty, and Reynier in operating upon women. It is not easy to decide which method is the best. The advantage of the transverse end-to-end method is that in it none of the length of the ureter is sacrificed, whereas in the oblique end-in-end operation and in the lateral anastomoses of Hook the loss must be at least half an inch and may be more. Of course, if the length of the ureter appears too short the kidney may be brought down to compensate for the loss or by separating the attachments of the duct for a few inches above and below the point of section.

When the loss of substance has been too great to permit

[12] Chirurgie der Nieren, vol. ii.
[13] Volkmann's Sammlung Klinisches Vortrage, 1890, No. 355, p. 3308.
[14] Archiv für Klinischer Chirurgie, Band xliv., Heft 4, 1892, p. 850.
[15] Annals of Surgery, vol. xx., p. 289.
[16] Ibid., 1893.
[17] Lectures on Surgical Diseases of the Kidney, 1888.
[18] Centralblatt für Gynäkologie, 1887, No. 50.
[19] For recent statistics see Bovee: Annals of Surgery, 1900, part 92, p. 165.
[20] Riforma Medica, 1887-88, p. 39.

of uretero-ureteral anastomoses grafting the end of the ureter into other parts has been resorted to. The one most frequently employed is uretero-cystostomy or implantation of the ureter into the bladder. Vesical grafting has been carried out in four different ways: (1) grafting the ureter to the bladder through the vagina; (2) grafting the ureter to the bladder by an extra-peritoneal route, an incision being made through the abdominal wall; (3) by an intra-peritoneal operation; or (4) by dividing the vesico-vaginal septum and grafting the ureter to the bladder direct. The first operation, according to Bovee, was performed by Tauffer in 1877. The next operation was done by Novaro in 1893, and since that time 80 uretero-cystotomies have been performed.

Grafting of the ureter to the vagina has been very seldom performed and is not a satisfactory operation. It has been done by Pawlik, Chavasse, and Kossinsky. The ureter has also been implanted on the urethra five times.

Implantation of the ureter into the bowel has also been employed, but the strong objection to this method is that septic infection is very liable to extend upwards to the kidney. Experimental implanation into the rectum, the colon, and the small intestine has been studied by Rosenberg, Novaro, Morestin, Tuffier, Gluck and Zeller, van Hook, and many others, but the operations performed upon animals contrast unfavourably with those undertaken on man. According to Bovee, bowel implantation has been done 65 times on man with a mortality of 30 per cent., and a little less than a half of these were from subsequent ascending infection.

Many different methods have been employed: (1) Simon in 1851 did the first operation of this kind in a case of ectopion vesicæ by placing a loop of thread so as to make it ulcerate through adjoining parts of ureter and rectum and producing a fistula between them; (2) implantation of both ureters with pieces of the bladder attached, as by Pozzi; or (3) grafting the ureter with a flap of vesical mucous membrane only. The majority of these operations have been employed on account of gynæcological operations in which the ureters have been accidentally wounded or divided in operation for uterine or ovarian disease, and especially in vaginal hysterectomies. They have also been used in cases where the bladder had to be resected for malignant tumours.

Implantation of the ureter on the skin has been resorted to in a considerable number of cases, Le Dentu being the first to employ it, but it seems to be justified only as a temporary measure or to save the patient from immediate death by anuria. Skin-grafting should only be resorted to when, from loss of substance, no other method is possible or to tide over a critical period, after which another implantation may be made or nephrectomy performed. As a rule, if implantation cannot be made into some part of the urinary tract, it should be made into the bowel, or if the kidney on the opposite side is healthy nephrectomy should be performed.

IRRIGATION OF THE KIDNEY.

Irrigation of the kidney *viâ* the ureters has been employed in a considerable number of cases and is said to be attended with good results. When it can be tolerated by the patient temporary good may be done, but the difficulties in carrying it out are so great and so irksome to the patient that incision of the kidney is to be preferred in most cases as a means of giving an exit to discharges.

Simon was the first to attempt the production of a systematic treatise on the surgery of the kidneys, but only the first two parts appeared. The third part, which was reserved for the consideration of cystic disease, tuberculosis, and moveable kidney, he did not live to complete. Subsequently to the appearance of his work, but 10 years later, the following books came out in succession: in 1885 Morris,[21] in 1886 Bruce Clark,[22] in 1888 Newman,[23] in 1889 Tuffier,[24] in 1890 Knowsley Thornton,[25] and in 1898 the first volume of Küster.[26]

The success of the surgeon in his treatment of renal disease largely depends upon his ability to detect lesions in their early stages. Consideration cannot be given to the development of the more exact diagnostic methods which have come into use in recent times, but it is quite certain that the means now at his disposal enable the surgeon to intervene at the onset of the disease and under the most favourable circumstances. When the operator is able to satisfy himself as to the nature and the extent of the disease the work he has to do is already clearly marked out. What we most require now in many cases is clearer insight in forming an early diagnosis. It is not how, but when, should we operate, also when should we withhold our hand so that we may be sure "to do good or to do no harm."

[21] Surgical Diseases of the Kidney, 12mo, pp. 548.
[22] Diseases of the Kidney amenable to Direct Surgical Interference, 8vo, pp. 176.
[23] Lectures on Diseases of the Kidney amenable to Surgical Treatment, 8vo, pp. 472.
[24] Etudes Expérimentales sur la Chirurgie du Rein, 8vo, p. 166.
[25] Surgery of the Kidneys, 8vo, pp. 102.
[26] Die Chirurgischen Krankheiten der Nieren, 8vo, pp. 274.

THE ROYAL COMMISSION ON SOUTH AFRICAN HOSPITALS.

(Continued from p. 965.)

VII.

WE may pass over Lord Methuen's advance (pages 19 and 20), with the remark that while the Commissioners consider that the medical arrangements were well devised and carried out there was some delay in establishing stationary hospitals at Orange river and Modder river. Lord Methuen's advance had a great advantage over that of Lord Roberts, in that the latter, having no line of railway communication with the base, had of necessity to use field hospitals as fixed hospitals for considerable periods. Kimberley was relieved on Feb. 15th, 1900. General Cronje's army was surrounded at Paardeberg from Feb. 16th to the 27th, when it surrendered. On March 6th the advance on Bloemfontein commenced, and after considerable fighting *en route* it was reached on the 13th. The facts in connexion with this part of the campaign from a military point of view are taken chiefly from the evidence of Lord Roberts, Lord Kitchener, Surgeon-General Wilson, and Major Bedford. We may note the following:—To ensure the mobility of the Kimberley relief column the transport was cut down to a minimum, the ordinary baggage of the column was left behind at Modder river, and the men had to advance with no change of clothing. Surgeon-General Wilson having declared that he could not carry out the medical arrangements for the advance with less than the minimum of transport allowed by the army regulations, had to yield to military necessity and to accept the decision of the Commander-in-Chief as he was bound to do. "Nothing but military necessities would have justified the reduction. It is not for us to question the decision of the military authorities, but we may say that we are convinced that the necessities justified the step taken by them and that the suffering thereby occasioned was part of the price that had to be paid for success in the campaign" (pages 21 and 22 of Report).

We need here only give a brief notice of a few important points. It was thought that when Kimberley was relieved the column, with its hospital service which was for military and transport reasons cut down to the utmost, would be again in touch with the railway for the transport of the sick and wounded to the stationary and base hospitals; but the unexpected movement of Cronje's force altogether changed the nature and course of the campaign. Up to Paardeberg the only way of dealing with the sick and wounded was to send them back to Modder river and Kimberley. The stationary hospital at the former place and the hospital at Kimberley acted as two base hospitals during the first part of the advance on Bloemfontein. Had there been a general hospital at Orange river it is admitted that the strain would have been very materially relieved. The reasons given for failing to plant a general hospital at this point are given (page 22 of the report). The treatment of the sick and wounded at Paardeberg was carried on under a great strain. The enemy were threatening the position, the sickness was increasing, there was no proper accommodation, the evacuation of the field hospitals had to be rapidly effected for an impending advance, and the sick were sent to Kimberley or the Modder river. The British medical authorities had, moreover, to take over all the Boer sick and wounded.

The British army operating in South Africa was almost entirely composed of a material most susceptible to enteric

fever. Roughly speaking, the age from 18 to 30 years is the time of life which may be said to be the enteric fever age in all countries. The South African army was composed of men of those ages and they were all, moreover, recent arrivals in that country. Now, it has been thoroughly established statistically in India that it is during the first and second years of Indian service, and more especially during the first year, that this susceptibility is so marked. Out of the total number of British troops of all ages who died from enteric fever in India in 1898, for example, 74 per cent. were between 20 and 25 years of age; and comparing equal percentages of soldiers during their first, second, and third years of Indian service their liabilities to contract enteric fever were respectively 43, 18, and 12. The greater the supply of susceptible material the greater the prevalence of enteric fever. We may conclude, therefore, that it was something more than a mere coincidence that during 1899 there was a great fall in the amount of this fever in the Indian army. The enteric fever admission-rate in India during 1899 was 20·6 and the death-rate 5·14 per 1000: whereas in the preceding year (1898) the rates were 36·9 and 10·17 respectively. The mortality-rate from enteric fever in the Indian army for 1899 was lower than it had been for nine years previously. There may have been, and probably were, other factors at work, but owing to the war in South Africa soldiers of longer service were being retained in India and fewer reinforcements of susceptible material from home were sent out there. Whether it be acclimatisation, or survival of the fittest, or some other cause, be it what it may, that confers the immunity, the fact remains that a short-service army newly arrived in a tropical or sub-tropical climate is a peculiarly vulnerable one in respect of typhoid fever. Like all stories worth the telling the moral lies on the surface, and it is easy of application to the case of the army in South Africa. When a spark of the disease-cause lighted upon such inflammable material, environed by the conditions in which that army was, a sudden and general conflagration of enteric fever was only to be expected. Our knowledge, too, has increased with regard to the etiology and pathology of the disease, how many may be the channels of infection, and how long such infection may last. We do not, as we have said, attach much importance to any comparative statistical returns of case-mortality unless assured that the bases of comparison were the same or very similar. The diagnosis of enteric fever in other armies—that of the Germans, for instance—is much more inclusive than ours. It is clear that the inclusion of cases of continued fever among those of enteric fever would tend proportionately to reduce the percentage ratio of case-mortality of the latter, and this is the probable explanation of the lower rates of mortality usually recorded in the epidemic outbreaks of typhoid fever in the German army before Paris and elsewhere during the Franco-German war of 1870.

But to return to the report of the Commission. The march from Osfontein, whither the troops had been removed from the fouled ground at Paardeberg, to Bloemfontein began on March 6th, 1900. There was fighting on the way at Driefontein with the result of an addition of 361 to the list of wounded. The whole difficulty on that occasion was one of transport. "Viewed as a whole, and considering the difficulties and nature of the advance, the cutting down of the transport and ambulances, and the deficient staff of the Royal Army Medical Corps, we think that the medical authorities did their best to deal with the situation." The force reached Bloemfontein on March 13th. In the beginning of April Surgeon-General Wilson telegraphed to England for more general hospitals and more civil surgeons, and on arriving at Bloemfontein on April 23rd, seeing the position of affairs there then, he sought for and obtained more doctors and nurses in South Africa itself. But these steps came rather late. The deficiencies of the staff at Bloemfontein and the lack of sufficient nurses were not realised as soon as they might have been. Although it was right under the circumstances not to convert the hotels into hospitals, yet one or more of the hotels might have been employed to afford accommodation for nurses. The report also points out that commandeering might have been carried out on a far larger scale to secure beds and other hospital furniture and clothing.

The field hospitals were not, we are told, overcrowded on arrival, but sickness on a great and alarming scale soon occurred. It was not so much the amount, as the suddenness with which such large numbers were almost simultaneously attacked, that caused the excessive strain. The conditions were those which we have already set forth. Field hospitals, never intended for other than very temporary occupation, soon became overcrowded. There was not only a deficiency of buildings that could be utilised for hospitals at Bloemfontein, but a deficiency of medical staff and equipment for those that were utilised as such. These buildings and the field hospitals formed the only accommodation for the sick and wounded until the arrival of No. 8, No. 9, and No. 10 Hospitals (page 26 of report). All the buildings (except the Raadzaal) used as hospitals in Bloemfontein were taken over by No. 10 General Hospital. The Raadzaal was taken over by No. 5 Stationary Hospital, and to this hospital accommodation the Portland Hospital, the Irish Hospital, and the Langman Hospital contributed in the first part of April an additional 300 beds between them. It was later that the suffering from overcrowding and want of equipment occurred, but the field hospitals were rapidly becoming more and more congested. On the advance of the force from Bloemfontein to Kroonstad in the beginning of May the field hospitals, in order to accompany the troops, had to be cleared of their patients, and large numbers of sick and wounded had to be sent back from the advancing force. All who were in excess of the accommodation and could not be taken into the buildings and private hospitals poured into the imperfectly equipped and under-staffed hospitals No. 8 and No. 9 where there were no means of stopping any influx in excess of the accommodation. The result of all this was for a time a deplorable amount of misery and suffering at Bloemfontein. In June the condition of things became much better owing to the fact that transport by rail had improved and access to the hospitals on the lines of communication and at the base had been again opened up. The strength of a chain is only that of its weakest link and the links of the medical administrative chain were not apparently of the strongest at Bloemfontein. The Commissioners, while freely admitting the sudden and for a time overwhelming nature of the epidemic outbreak, leave it to be plainly inferred that the management and arrangements connected with No. 8 and No. 9 Hospitals left very much to be desired.

The condition of No. 8 General Hospital was unsatisfactory from its start and it did not begin to take in patients at Bloemfontein until about April 23rd, 1900. There is no doubt that, in addition to overcrowding, the state of this hospital was very unsatisfactory, in point of staff, equipment, dieting, and several other respects. What with the sudden influx of numbers and one thing and another its condition grew worse and worse, as will be seen by reference to pages 32 and 33 of the report. The Commissioners, after making due allowance for the great difficulties that had to be encountered, are not at all satisfied that the best had been done in the way of energy and of administrative and organising power on the part of its principal officers. To add to the difficulties, at a time when the services of capable, clear-headed, and tactful officers should have been directing the management of affairs and all should have been animated with one and the same object and should have been striving together to attain it, there were "internal dissensions and friction" between the civil surgeons in the hospital and the officers of the Royal Army Medical Corps and even between the senior officers of the Royal Army Medical Corps themselves. That was a state of affairs which, as the Commissioners say, "could only result in disorganisation."

As to the conditions of No. 9 Hospital they were very similar to those of No. 8; but it had, upon the whole, an excellent staff, the different members of which worked well together. The overcrowding was even greater in this hospital than in No. 8 owing to the fact of its being near to the railway-station. The hospital, equipped for 520 beds only, opened about April 19th, 1900. In May the influx of patients kept increasing until it had, after May 6th, reached a maximum of 1644. The condition of things, as a whole, was much what it was in No. 8, and as an indication of the strain it may be mentioned that its kitchen, as in No. 8, which was originally prepared for 520 patients only, had for a time to prepare food for an average of over 1200. These grave defects the Commissioners ascribe to the use of field hospitals as stationary hospitals, while in the case of No. 8 and No. 9 Hospitals they were to a large extent due to difficulties of transport. The only course open to the medical authorities was to have taken and to have equipped buildings as hospitals as soon as possible after the occupation of the town and to have hurried up the general and stationary hospitals with their staff and equipment. But it is not every public or private

building that is at all suitable for a hospital—indeed, for sanitary reasons, few are—and a number of small buildings means difficult administration and great waste of *personnel* and *matériel*. Fixed hospitals, it must be remembered, too, are not exempt from capture under the Geneva Convention, and for some time before Bloemfontein was occupied fixed hospitals could not be posted near that town owing to the proximity of the enemy. The facts connected with the arrival of the hospitals (other than field hospitals) in the town are set forth and the Commissioners say, "On the whole we do not think that there is any blame to be attached to the medical authorities in respect of the circumstances and times under which these hospitals were sent up to Bloemfontein" (pages 36 to 38 of the report). The Commissioners then deal from an independent and critical standpoint with the delay in bringing up the staff and in supplying necessary articles and with several other matters affording substantial grounds of complaint. Concerning the charges against hospital management at Bloemfontein generally, the following is the summing-up at pages 44 and 45 of the report: "As regards certain general charges, we think it only right to say that a false impression is conveyed of the state of things existing at Bloemfontein by such statements as these, to the effect that in particular hospitals there were thousands of men in deadly disease, or that thousands of men were left unnursed, or that men were dying against convalescents in the tents (though no doubt in a few cases men may have died next convalescents), or other like general statements. The substantial grounds of complaint at Bloemfontein we have sufficiently pointed out above, and there is nothing in them to justify any charge of inhumanity or of gross or wilful neglect or of disregard for the sufferings of the sick and wounded on the part of the medical authorities or others having the duty of looking after them."

We have striven to depict the situation at Bloemfontein as it has impressed itself upon our minds, and, deplorable as it was, what does it really amount to? The causes which brought it about were mainly military (strategical) exigencies, insufficient transport, and a sudden and well-nigh overwhelming outbreak of enteric fever. We are far from saying that there were no mistakes or serious defects, no wasted or misused energy, or that the arrangements for the convenience and comfort of the troops and of the sick and wounded in the way of accommodation, transport, feeding, and so forth, were all that we hope to see them in future campaigns. The evils were serious and should not be minimised, and steps ought to be taken with a view of remedying them.

We need not enter upon any detailed account of the advance to Kroonstad because in many respects it was similar to and subject to much the same conditions as those attending on the advance to Bloemfontein. In one respect they differed, inasmuch as on the very first occupation of Kroonstad commandeering was resorted to and most necessaries were obtained for the hospitals. The Commissioners think, however, that with regard to a few things commandeering was not pushed to the full extent to which it might have been. The troubles at Kroonstad were undoubtedly chiefly due to three causes, say the Commissioners—namely, the insufficiency in number of the field hospitals, the deficiency in point of numbers of the Royal Army Medical Corps staff, and the difficulties of transport (pages 50 and 51).

SUPPLEMENTARY BATHS AT HOTELS.

AN encouraging feature of modern hotels is the attention that is being directed to the provision not only of ordinary baths but of other baths also. The comforts of an hotel are undoubtedly enhanced when, for example, the equipment includes special baths, such as Turkish baths, hot or cold sea-water baths, and electric baths, and a source of considerable attraction and value is thereby gained. The English people are slowly but surely realising that treatment by means of baths for the relief of certain ailments such as gout and rheumatism may be just as efficiently conducted at home as abroad.

We have already described in our columns[1] the ferruginous baths recently adopted at Shanklin, which are identical in composition with those of Homburg, Spa, and Schwalbach on the Continent. A similar example of worthy enterprise may be seen in an interesting installation of various baths which has recently been made at the old historic hotel, the Granville at Ramsgate. This hotel, which has been entirely remodelled in accordance with modern requirements, was originally designed by Mr. Welby Pugin, a member of a noted family of architects who one and all contributed largely to some of the excellent specimens of architecture to be found in the old Kentish town. Besides sea-water baths, hot and cold, the new installation comprises a spacious Turkish bath with the usual cooling-room, hot rooms, shampooing-rooms, and a douche-room, and also a plunge sea-water bath. The plunge bath is contained in a room 37 feet long and 17 feet wide, the depth alternating from two and a half to five and a half feet. The accommodation of this plunge-bath is such as to permit swimming exercise and the bath communicates directly with the Turkish baths. In addition a series of baths has been installed which are adapted for so-called "ozone" treatment which in reality means a seaweed bath. For this purpose carefully selected seaweed is crushed in order to express its juice as much as possible in warm sea-water until a somewhat slimy liquid is obtained. It may be diluted with hot sea-water at will. The efficacy of this bath in gout and rheumatism is, perhaps, due in part to the absorption of the peculiar organic compounds of iodine, in part to the effect of the seaweed as a kind of warm cataplasm, and in part to the action of the sea minerals. The odour of seaweed thus treated is very strong and the vapour of the bath gives a sense of relief in irritable conditions of the respiratory tract. All these baths are situated in an annexe of the hotel, while the hotel itself is fitted throughout with baths provided with a special stop-cock which will supply sea-water hot, warm, or cold, or fresh water by moving the indicator of the stop-cock opposite to the name on an enamelled plate indicating the supply required. The installation is quite a new departure. The sea-water supply is drawn from a selected spot and elevated to a tower where the sand and other suspended matters are allowed to subside. At the basement of the building is a modern installation of electrical machinery and water-heaters. The hotel is thus provided with remarkable facilities for keeping an installation of baths in going order.

It is proposed to add to this already excellent equipment a series of electrical baths and other baths as the need for such may be felt, the addition of other special baths being a simple matter with such facilities at hand. The enterprise is worthy of all encouragement and the appointments are admirable. The services of a visiting medical man are retained and skilled bath attendants act under his direction. The aims indicated above are to be commended—namely, the provision of facilities for taking a course of baths such as may be obtained at health resorts on the continent and in certain of our inland watering-places, with the added advantage of a sea-water supply and of an environment the tonic and bracing influences of which have long been recognised.

[1] THE LANCET, August 18th (p. 483) and Oct. 6th (p. 1029), 1900.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6609 births and 4450 deaths were registered during the week ending March 30th. The annual rate of mortality in these towns, which had decreased from 21·5 to 18·4 per 1000 in the four preceding weeks, rose again last week to 19·7 per 1000. In London the death-rate was 18·4 per 1000, while it averaged 20·5 per 1000 in the 32 large provincial towns. The lowest death-rates in these towns were 12·8 in Croydon, 13·0 in West Ham, 14·0 in Birkenhead, and 14·6 in Brighton; the highest rates were 23·2 in Huddersfield and in Newcastle, 23·4 in Birmingham, 28·2 in Liverpool, and 29·7 in Plymouth. The 4450 deaths in these towns last week included 427 which were referred to the principal zymotic diseases, against 370 and 356 in the two preceding weeks; of these 146 resulted from whooping-cough, 120 from measles, 59 from diphtheria, 43 from diarrhœal diseases, 34 from scarlet fever, and 25 from "fever" (principally enteric). No death from any of these diseases occurred last week in Brighton or in Huddersfield; in the other towns they caused the lowest death-rates in Plymouth, Norwich, Blackburn, and Halifax, and the highest rates

in Birkenhead, Liverpool, Hull, and Gateshead. The greatest mortality from measles was registered in Liverpool, Hull, and Gateshead; from scarlet fever in Preston; and from whooping-cough in Bristol, Cardiff, Swansea, Wolverhampton, Nottingham, Birkenhead, Hull, and Sunderland. The mortality from "fever" showed no marked excess in any of the large towns. The 59 deaths from diphtheria included 16 in London, six in Bristol, six in Leicester, six in Sheffield, and five in Salford. No fatal case of small-pox was registered last week in any of the 33 large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums hospitals during the week ending March 30th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 1568, against numbers declining from 2535 to 1598 on the 13 preceding Saturdays. The deaths referred to diseases of the respiratory organs in London, which had been 501 to 332 in the four preceding weeks, rose again last week to 363, but were 78 below the corrected average. The causes of 67, or 1·3 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Leicester, Salford, Bradford, and 10 other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool, Sheffield, Hull, and Newcastle.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined from 24·5 to 21·1 per 1000 in the four preceding weeks, rose again during the week ending March 30th to 21·6 per 1000, and showed an excess of 1·9 per 1000 over the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 15·1 in Perth and 18·1 in Dundee to 22·8 in Glasgow and 24·0 in Edinburgh. The 678 deaths in these towns included 36 which were referred to whooping-cough, 17 to measles, 16 to diarrhœa, 10 to small-pox, six to diphtheria, four to scarlet fever, and four to "fever." In all, 93 deaths resulted from these principal zymotic diseases, against numbers declining from 122 to 87 in the four preceding weeks. These 93 deaths were equal to an annual rate of 3·0 per 1000, which was 1·1 per 1000 above the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of whooping-cough, which had declined from 67 to 38 in the four preceding weeks, further decreased last week to 36, of which 14 occurred in Glasgow, eight in Dundee, five in Edinburgh, five in Paisley, and three in Leith. The deaths from measles, which had been 15, 10, and eight in the three preceding weeks, rose again to 17 last week, and included eight in Edinburgh, five in Glasgow, and three in Aberdeen. The fatal cases of diarrhœa, which had been six and 15 in the two preceding weeks, further rose last week to 16, of which eight were registered in Glasgow, two in Edinburgh, two in Dundee, two in Aberdeen, and two in Paisley. The deaths from small-pox, which had been 20, 24, and 11 in the three preceding weeks, further declined last week to ten, all of which were recorded in Glasgow. The fatal cases of diphtheria, which had been seven in each of the two preceding weeks, declined to six last week, and included two in Glasgow and two in Edinburgh. The deaths from scarlet fever, which had been five and two in the two preceding weeks, rose again last week to four, of which three occurred in Glasgow, where two of the four fatal cases of "fever," were also recorded. The deaths referred to diseases of the respiratory organs in these towns, which had been 171 and 126 in the two preceding weeks, rose again to 126 last week, but were 45 below the number in the corresponding period of last year. The causes of 27, or nearly 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 34·6 and 36·6 per 1000 in the two preceding weeks, declined again to 34·0 during the week ending March 30th. During the 13 weeks of the quarter ending on that date the death-rate in the city averaged 33·6 per 1000, the rate during the same period being 18·7 in London and 22·0 in Edinburgh. The 226 deaths belonging to Dublin registered during the week under notice were 17 less than the number in the preceding week, and included 14 which were referred to the principal zymotic diseases, against 12, 14, and 15 in the three preceding weeks; of these, 11 resulted from scarlet fever, one from measles, and one from "fever." These 14 deaths were equal to an annual rate of 2·1 per 1000, the zymotic death-rates during the same period being 1·8 in London and 3·0 in Edinburgh. The mortality from scarlet fever was largely in excess of that recorded in any recent week. The 226 deaths in Dublin last week included 29 of children under one year of age and 58 of persons aged upwards of 60 years; the deaths both of infants and those of elderly persons showed a decline from the numbers recorded in the preceding week. Seven inquest cases and four deaths from violence were registered; and 80, or more than one-third, of the deaths occurred in public institutions. The causes of 14, or more than 6 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Staff Surgeons J. F. Hall to the *Arethusa*, and C. G. Matthew to the *Pelorus*. Surgeons: A. Gaskell to the *Barfleur*, B. F. Parish to R.M.A. Headquarters, Portsmouth, and E. T. Meagher to the *Duke of Wellington*.

Fleet Surgeon William Berkeley Drew has been promoted to the rank of Deputy-Inspector-General of Hospitals and Fleets in His Majesty's Fleet.

ROYAL ARMY MEDICAL CORPS.

The undermentioned Majors to be Lieutenant-Colonels:—Alfred O. Geoghegan, Benjamin T. McCreery, John Richard Dodd, George Edward Twiss, Charles George Drummond Mosse, Arthur Bowdich Cottell, Thomas Archer, Herbert John Robert Moberly, Alfred Paul Hart, Henry John Barnes, Richard Henry Stewart Sawyer, Walter George Augustus Bedford, Richard Jennings, Stapylton Chapman Bates Robinson, Richard William Ford, George Coutts, William James Baker, Henry Kingston Allport, Edward Butt, Samuel Townsend, Tom Percy Woodhouse, Joseph Gibson, James Havelock Alexander Rhodes, Louis William Swabey, Richard Edward Ricketts Morse, William Rowney, Thomas Rashleigh Lucas, Alfred Goodwyn Kay, William Wippell Pope, Robert Porter, Richard Charles Kirby Laffan, Charles Andrew Pearson Mitchell, George John Coates, Thomas Broderick Albert Tuckey, Frederick Arthur Harris, Francis Augustus Bonner Daly, Alexander Simpson Rose, John Battersby, James Maconachie, Menus William O'Keeffe, Thomas Joseph O'Donnell, Reynolds Peyton Hetherington, Thomas Arthur Dixon, and Walter Croker Thomas Poole.

Captain H. W. Vaughan-Williams, from half-pay, to be Captain, with precedence next below J. M. Buist, vice W. P. Barter, deceased.

SOUTH AFRICAN WAR NOTES.

Major Wyatt, R.A.M.C., is reported to be slightly improved (Bloemfontein, March 27th).

Civil Surgeon Bruce is reported out of danger (March 27th).

Major C. Stonham, R.A.M.C., Lieut.-Colonel A. H. Keogh, R.A.M.C., and Civil Surgeon Green have arrived in England.

THE VICTORIA CROSS.

The Victoria Cross has been conferred by the King upon Lieutenant H. E. M. Douglas, R.A.M.C., for the following act of gallantry:—"On Dec. 11th, 1899, during the action at Magersfontein, Lieutenant Douglas showed great gallantry and devotion under a very severe fire in advancing in the open and attending to Captain Gordon, Gordon Highlanders, who was wounded, and also attending to Major Robinson and other wounded men under a fearful fire. Many similar acts of devotion and gallantry were performed by Lieutenant Douglas on the same day."

TRANSACTIONS OF A GERMAN AMBULANCE AMONG THE BOERS.

Writing under the rubric "Revue des Guerres" in the *Archives de Médecine et de Pharmacie Militaires* for March, Dr. G. Fischer, a junior surgeon in the French army, gives the subjoined table with reference to the mortality from gunshot

wounds in the German Red Cross Ambulance which proceeded to South Africa under the charge of Dr. Matthiolius in December, 1899.

Boer mortality from wounds by—	Cranium.	Face.	Thorax.	Abdomen.	Vertebral column.	Limbs.	Total.
Artillery projectiles ...	3	1	—	—	1	2	7
Percentage to wounded	21·0	10·0	—	—	100·0	3·4	7·5
Small-arm projectiles ...	6	1	2	4	2	1	16
Percentage to wounded	44·4	4·5	7·1	15·4	50·0	0·5	5·8

Dr. Fischer is also responsible for the statement that at the six engagements specified below the Boer losses amounted to 224 killed and 607 wounded, the proportion between the two categories being as 1 to 2·7: Maggersfontein (Dec. 11th, 1899), Tafelkop (March 29th, 1900), Ladysmith (Jan. 6th, 1900), Colesberg (Jan. 4th–6th, 1900), Tugela (Jan. 17th–26th, 1900), and Kœdœsberg (Feb. 7th, 1900). (The orthography in the *Archives* has been adhered to).

DEATHS IN THE SERVICES.

Inspector-General Richard Dane, C.B., at Southampton on March 27th, aged 88 years. He entered the army in 1835 as assistant surgeon, was promoted to surgeon-major in 1855, and reached the rank of inspector-general of hospitals in 1868. He served in the Punjab campaign of 1848–49, including the battle of Gujarat (medal), and acted as principal medical officer of the expeditionary force in China in 1858, being present in the various operations of the campaign (mentioned in despatches). On his retirement in 1872 he received the C.B. and a special pension for distinguished services.

Surgeon James Powell Willis, R.N., of the Portsmouth training ship *St. Vincent*, at Sundayswell, Cork, on March 25th, from typhoid fever after an illness which lasted five weeks. The deceased, who was only 29 years of age, was a son of Fleet Surgeon S. Armstrong Willis, R.N. (retired), and received his medical education at the University of Durham, where he took various scholarships and graduated M.B. (with honours) and B.S. in 1892. Surgeon Willis leaves a widow and child.

The King has given to Major Cathcart Garner, R.A.M.C., His Majesty's Royal licence and authority to accept and to wear the Insignia of the Third Class of the Imperial Order of the Medjidieh, conferred upon him by His Highness the Khedive of Egypt, authorised by His Imperial Majesty the Sultan of Turkey, in recognition of valuable services rendered to His Highness.

Correspondence.

"Audi alteram partem."

THE DUTY OF THE PROFESSION IN REGARD TO LEGISLATION FOR ALCOHOLIC EXCESS.

To the Editors of THE LANCET.

SIRS,—Your leading articles on the alcohol question in THE LANCET of Feb. 9th, p. 410, and March 23rd, p. 873, suggest a still further discussion of this medical question—for a medical question it is of momentous import. Few medical men can doubt that there are now five medical questions which concern the public health and the race stability more than any others—viz., the ordinary infectious diseases question, the consumption question, the syphilis question, the housing question (which includes the provision of proper playgrounds for our children), and the alcohol question. Not one of these can be adequately solved but through the application of scientific facts and principles the import of which the medical profession alone can fully estimate. I most strongly concur with you that in regard to the whole alcohol question we as a profession have not taken up the position that our knowledge and opportunities give us, and when we have spoken it has scarcely been with that earnestness which comes of an assured conviction that we are dealing with one of the most dangerous enemies to our modern English race that exists. The advances in scientific knowledge in regard to brain physiology and pathology and its mental relations within the past half century entitle us, nay, they should compel us, to utilise that knowledge for the benefit of the public health as well as for the individual patients whom we treat. I hope there are few medical men who will not heartily agree with you and Dr. William Carter of Liverpool that the alcohol question should now be treated as a part of public and preventive medicine. Thus only can we get it subjected to those great principles that have initiated the recent legislation for the health of the community and the stability of the race which are embodied in the Factory Acts, the Lunacy Acts, the Workshop Inspection Acts, and the various Acts relating to public health. It is chiefly, I believe, by a clear realisation on the part of the public and of politicians that such principles, through which the absolute liberty of the subject is conditioned for the good of the social body and the benefit of future generations, are applicable to the alcohol question that they will embody them into effective laws. The medical profession alone can demonstrate this applicability. Thus only can the enormous influences of "the Trade" be overcome. That great power will fight the mere social reformer, the prohibitionist, and the teetotaler to the death, and hitherto it has fought them all most effectually. But cold, hard scientific principles used dispassionately by a profession which has no antagonism whatever to "the Trade," has no personal advantages in the matter, and is obviously acting in the public interests, must surely prevail in the long run. Thus only shall we get rid of pettifogging attempts to remedy the alcoholic evils in detail, and be able to put the whole of the legislation in regard to alcohol on as broad a basis of principle as the existing Public Health Acts. To a considerable extent the embodiment of the proposals in Lord Peel's report would come up to the ideas of our profession on this subject. Here it may be necessary to point out that in educating the public mind and in legislating for the nation in regard to alcohol no practical account need be taken of the Weismann or other such transcendental theories of heredity, or of any such theory of alcoholic "immunity" as was lately developed so interestingly by Dr. Archdall Reid. The hard and undeniable scientific facts about the injurious action of excessive alcohol on the brain functions and structure can be as clearly demonstrated as the mutual interaction of an acid and an alkali. Whatever theory of heredity may ultimately be proved to be the true one, the fact is demonstrable that the children of the worst kind of drunkards are to a great extent ill-developed, neurotic, criminal, feeble-minded, or insane, and therefore bad citizens. It does not weaken the force of these facts, but rather strengthens them, that the drunken parent was himself probably of a neurotic, degenerate stock, this being one cause of his taking to drink, and that he thus fell an easy prey to the temptations which beset him at every public-house or in the social customs of his class. When to adverse hereditary influences we have added toxic interference with the germ plasm, a bad environment in childhood, bad and insufficient food, a bad example at home, and unphysiological conditions of life generally during childhood and adolescence, we have a sum of conditions which make for national decay and which call urgently on the State for remedy by every means in its power.

If the doubter needs additional facts we can refer him to Professor Kraepelin's recent careful scientific experiments on the injurious effects of large, but non-intoxicating, doses of alcohol on the mental and motor working of otherwise healthy brains, and the extraordinary persistence of some of these effects for long periods after the alcohol has been stopped. Such physiological facts will receive sure confirmation through the pathological changes that within the past 10 years our microscopists, by their recent methods of preparation, have been able to demonstrate in the brain cortex of alcoholics—changes affecting the blood-vessels, the neuroglia, and the cells. Such changes can be seen both in those dying from acute alcoholic toxæmia and in the case of the respectable toper who has lived and enjoyed himself for 20 years since he began to drink too much, all the time getting lowered in mind and morals *pari passu* with his cortical deterioration and in consequence of it.

The effects of excessive alcohol in causing insanity, both *de novo* and by bringing out latent tendencies thereto, I can

speak about with some confidence after nearly 30 years' experience at the head of a large mixed city asylum. I find alcoholic insanity increasing here in prosperous times, as my friend, Dr. Yellowlees, found long ago in Glamorganshire. It now amounts to 25 per cent. of our admissions. If this is general, surely no social fact should cause a more intense feeling of disappointment to the well-wisher of our British race. That the extra money which might have provided food, luxuries, books, amusements, greater happiness, and longer life to our artisans and labourers should have gone towards brain poison, causing mental disease and degeneration, is surely one of the most biting of satires on our boasted nineteenth century progress. Could any greater human act of folly possibly be conceived? Science has nothing to say against punishing the ordinary responsible drunkard for being found drunk and for any criminal act he may commit while drunk. It has no theories that tend to diminish the responsibility of healthy men to the law. Duty, conscience, accountableness mean just as much in true science as they do in law and ethics. But science does step in and point out that there are special temptations and opportunities to drink which cannot or are not likely to be resisted by certain uneducated or unstable brains in which the faculty of inhibition is weak, and that while such persons might under favourable circumstances in a generation or two get over their brain weaknesses through the natural laws that tend to bring a weak organism back to the ideal, they will, when poisoned by alcohol, go surely on towards mental disease, crime, and extinction—meantime handing down a progeny with all their own tendencies accentuated.

Another thing the medical profession is specially fitted to do, and that is to judge rightly the safe limits of the pleasures and the social and personal amenities which alcohol in physiological quantities may secure, and to pick out the persons who can safely indulge in such pleasures. They fully recognise, through their physiological and medico-psychological studies, that human nature has never in any age or race been satisfied with bread-and-butter, but that it has craved, and always has secured, some stimulant or narcotic in addition to its common food. They can look at this fact from a scientific and brain point of view, not usually being biased or carried away by metaphysical, religious, or ethical standpoints in estimating the significance of such cravings. They can distinguish between a controllable desire and a morbid and injurious craving for such things, whether it be tea, tobacco, opium, or alcohol. They know where safety lies and danger begins. They well know also that men and women largely sin in ignorance when they begin to exceed in the use of such brain stimulants and sedatives, but that excess once begun it is apt to be a case of *facilis descensus Averno*. They also know, as no other men can know, the meaning of that slight mental and moral lowering which results from the habitual over-use in small degrees of stimulants.

This special knowledge throws a tremendous responsibility on our profession towards the public in regard to the alcohol question. But it may be suggested: "If the State or society for its advantage wants to get the benefit of our scientific experience let it ask us for our opinions, and put us in a position to have our views translated into laws." I do not think we can thus get rid of our duty. The State now deals with the alcohol question in a way, and it has created a most profitable monopoly in its sale so that it can further deal with it as it thinks good for the existing community and for the race of the future. If we can instruct the State and make our legislators realise that the advances of scientific knowledge have created a new and an imperative duty in this matter towards the health and well-being of our people, surely we are bound to exert all our influence to secure efficient legislation, just as you point out that Snow and Simon and others of our profession persuaded the State to embody their scientific discoveries in the Acts that provide pure water and air uncontaminated with sewage exhalations for the people. The populace did not make these demands. It was too ignorant at the time, just as it is now in regard to the scientific aspect of the alcohol question. The State did not go to Snow and Simon. Those men first convinced the medical profession of the truth of their views and then went to the State to tell it its duty. Parliament was profoundly ignorant of the facts and very sceptical. The scientists were "impractical" doctrinaires and the legislation demanded was sneered at as "grandmotherly." We are now in the same position in regard to the alcohol question. We cannot shirk our plain duty in this matter. It is certain, too, that, as in regard to ordinary sanitation, the existence and working of such Acts would be a most important education to the public in regard to the dangers of alcohol. Thus sobriety on principle and conviction would be attained—the highest result of all. Surely we might now reasonably ask something like the following legal provisions.

1. Powers to restrict the liberty of the habitual drunkard and to place his name on a black list or to put him under treatment. 2. Powers to protect children in every reasonable way against alcoholic evils. 3. Compulsory instruction in regard to the dangers of drink and the necessity of physiological temperance to be given in all schools. 4. A strict and even suspicious inspection of all public-houses by a special department of police. It is a most anomalous and irrational thing that dairies, factories, lunatic asylums, gaols, reformatories, workhouses, schools, and many special trades are rigorously inspected by the State, while public-houses, that may do far more harm to society than any of these are left practically uninspected. 5. Provision for a careful inquiry by a public, impartial authority into the character of those who hold licences and sell drink in public-houses before the licence is granted. 6. The punishment of everyone who knowingly sold drink in such quantities the immediate effect of which was to create the condition and crime of drunkenness. 7. Provision for good food and non-intoxicating drinks in all public-houses. 8. A general diminution of temptations to excessive drinking and shorter hours for public-houses. 9. A duty laid on an impartial judicial and medical authority to investigate the causes of any special amount of drunkenness, or disease, or race degeneration the result of drunkenness in any locality, and powers to enforce drastic remedies. 10. Abundant liberty for localities to try methods of supplying the public with drink other than through the ordinary licensed public-house, and to provide counter-attractions in every reasonable way.

I am, Sirs, yours faithfully,

March 30th, 1901. T. S. CLOUSTON.

LEGISLATION AGAINST NATIONAL INTEMPERANCE.

To the Editors of THE LANCET.

SIRS,—Two questions lie at the root of the problem of temperance reform—the question as to whether parental intemperance affects children subsequently born and the question as to whether measures for diminishing or abolishing the use of alcohol are practical. I need not dwell on the first point. It was dealt with at length in THE LANCET of Oct. 14th, 1899, p. 1006. I observe, however, that your correspondent, "M.D., B.S. Lond.,"[1] states that "it is a fact that habits of intemperance in either parent tend inevitably to produce conditions which act unfavourably upon the children and interfere with the healthy development of both mind and body." May I ask him for evidence in support of this statement—which, if true, is of such momentous importance that the whole temperance problem hinges on it? My request has been made many times, but the reticence and silence which have always followed are so curious that I await his reply with unusual interest.

Of late years temperance reform has been tried on a very wide scale in the civilised world. I have ventured to challenge[2] its advocates to indicate a single instance of its successful application—to indicate a single instance in which prohibitory laws have not been followed by increased drunkenness, as well as by a general degradation of the public morals. As yet I have received no reply, and I anticipate none. The most drastic measures having failed everywhere "M.D., B.S. Lond." proposes to exclude children and barmaids from public bars. He will perhaps pardon me, but I am irresistibly reminded of the hysteric lady who tried to sweep back the ocean with a broom. He inveighs against the "firmly rooted belief in the general usefulness of alcohol both as a remedy in disease and as an article of diet," and declares that "it is our duty to put the facts clearly and authoritatively before the public." I cordially agree. But may I add that some knowledge of the biological truths which underlie this matter, as well as of the disastrous failures which have attended all attempts at

[1] THE LANCET, March 23rd, 1901, p. 892.
[2] THE LANCET, Feb. 23rd, 1901, p. 573.

temperance reform on the lines laid down by your correspondent would be useful also. When we cease to push back the ocean with a broom, when we raise the level of the land, then we may be successful.

I am, Sirs, yours faithfully,

Southsea, March 26th, 1901. G. ARCHDALL REID.

To the Editors of THE LANCET.

SIRS,—The letter of your correspondent, Dr. H. Laing Gordon, would have received my attention, but with "M.D., B.S. Lond." I quite agree in regarding it as not at all helpful. I believe I am acquainted with the recent researches in alcohol and my conclusions, as stated in THE LANCET of Feb. 23rd, p. 578, represent, I believe, the correct modern view. Your columns, Sirs, cannot possibly be thrown open to the consideration of any subject more vital in importance, for if drunkenness could be largely diminished by legislative or other action the greatest hindrance to further sanitary advance would be removed and the general death-rate might fall to 14 per 1000, for, as it has been observed, the deaths from intemperance have risen from 45 per 1,000,000 of those living to 77 per 1,000,000. Now, Sirs, the medical profession has reduced the death-rate of the country to its present level, and it alone can, and I believe will, break down this greatest hindrance also. There is now a bitter cry throughout the country from the laity to our profession for help and concerted action. Declarations by the profession as a whole have been made in the past upon subjects with such vital relations to the welfare of nations and with the most successful results. Is not the present time opportune for such? I will gladly subscribe to any fund required to promote concerted action.

I am, Sirs, yours faithfully,

Lightcliffe, Yorks, March 23rd, 1901. ASPINALL MARSDEN.

THE RECENT EPIDEMIC OF TYPHOID FEVER IN SOUTH AFRICA.

To the Editors of THE LANCET.

SIRS,—In the recent discussion on this subject before the Clinical Society of London, Dr. Howard Tooth[1] in his very able paper gave expression to the opinions of the majority, at all events, of medical men who have had opportunities for observation during the epidemic in South Africa. The fact of water being the chief source of infection is beyond question. Even water derived from very deep levels has been shown to contain pathogenic organisms. In one instance, at all events, water taken during the sinking of a mine shaft at a level of nearly 200 feet was found to contain streptococci, and on investigation this was found to be infected from surface water which had become contaminated by passing through disused filled-in latrine trenches some hundreds of yards away. Filtration through the soil, therefore, had had but little effect upon the water and, as the event proved, the water induced a serious outbreak of enteric fever amongst those who had made use of it for drinking purposes, from which it may be assumed that the bacillus typhosus was also present.

As Dr. Tooth points out the spread of enteric fever by dust has received far less attention than it deserves. That infective material does become dried and driven about as dust is beyond dispute. This was proved on several occasions at Johannesburg last year by exposing culture plates during dust-storms. It is difficult enough to devise any certain and practicable method for purification of infected water; it is impossible entirely to obviate risk of infection by dust. In some directions, however, it is possible and in one in particular much might be done which is not done at present. It is quite impossible to avoid the transference of patients sick from enteric fever in various stages, or from dysentery, or from the various forms of diarrhœa which are so universal in South Africa and the precise nature and relationship of which are so obscure. During the transport by train it is obvious that the lavatory accommodation is strained to the utmost. The waste-pipe from the water-closets discharges directly on to the line, and except in the case of lying-down patients, who are by no means the only infective ones, no method of sterilisation is adopted. In the neighbourhood of stations sick trains are constantly delayed on sidings. One that I took down country, for instance, was delayed on a siding all night, 68 patients, all either enteric fever or dysentery cases, being on board. The condition of that siding in the morning can be better imagined than described. There was doubtless infective material enough in that one spot properly distributed to spread enteric fever and dysentery throughout South Africa. This constant infection of the line during many months supplied ample material for the distribution of disease by dust. There was probably not one single station or siding from Cape Town to Pretoria in which enteric fever and dysentery cases might not be found. The remedy for this infection of the railway track is obvious and simple. If instead of the waste-pipe discharging on to the permanent way tanks containing some efficient antiseptic were provided beneath the lavatory, which could be emptied and the contents destroyed as opportunity offered each day, one very constant and active source of infection might be greatly lessened if not entirely removed.

Flies unquestionably formed almost as serious a means of distribution of infective disease as dust. They swarmed in the latrines and were the pest of the enteric fever tents; on the surgical side of the hospital they were very little trouble comparatively. Food left uncovered even for a minute during the summer-time was quickly black with flies and there can be no shadow of doubt that many must have previously been upon infective material. As Dr. Tooth very truly remarks, the wonder is not that the epidemic was so severe, rather is it a matter of congratulation that it was not more so, considering how many unavoidable causes were at work.

The causes of the spread of the disease, at all events on active service, being in many cases wholly unavoidable, the success or otherwise of protective inoculation becomes of vast importance. The statistics which have so far been forthcoming are, to say the least, unconvincing. Moreover, those emanating, or which will shortly emanate, from the military hospitals will, it is to be feared, be of little or no scientific value whatever. The reason is not far to seek. A very large number of cases stated to be those of enteric fever proved ultimately not to be so. When first seen there was doubtless every reason for believing that the diagnosis was correct; but when transferred, as such cases often were, to another hospital, a few days' observation proved that the attack of fever, whatever may have been its nature, at all events was not enteric. The sick reports which arrived with these cases were marked "enteric" and also "inoculated" or "not inoculated" as the case might be. In many instances no official alteration of the original diagnosis was made. Since the statistics are, or will be, largely if not wholly compiled from these sick reports it is obvious that it does not need very many of these erroneous papers to vitiate any statistics that may be drawn up from them. That it should be well-nigh impossible to avoid these clerical errors on active service is obvious to anyone who knows the conditions under which the work has to be carried out. They are, after all, only errors on paper and no patient ever suffers as a result of them. At the same time, it is only right to point out this serious source of error when one hopes for scientific conclusions as to inoculation for enteric fever to be drawn from the statistics that will ere long be published. If this source of error can be eliminated then of course the statistics become of real value and some degree of finality may be attained. I am unable to quote figures at the present time, but Dr. Pershouse, who was head of the enteric division of No. 6 General Hospital, and who had many hundreds of unquestionable cases of enteric fever through his hands, assured me that after very careful study of the question and from very carefully kept records he was unable to give a definite opinion in favour of inoculation. It is essential that not only should the mortality of authenticated cases be recorded but also that the incidence of the disease in the inoculated and uninoculated should be shown.

The question is one of such paramount importance that it is sincerely to be hoped that reliable evidence will ultimately be forthcoming.

I am, Sirs, yours faithfully,

H. TEMPLE MUSSELL, M.B., F.R.C.S. Edin.,
Late Civil Surgeon, British Forces, South Africa.

Weymouth-street, W., March 29th, 1901.

[1] THE LANCET, March 16th, 1901, p. 769.

"THE TEACHING OF ANÆSTHETICS."

To the Editors of THE LANCET.

SIRS,—In Dr. Frederic Hewitt's letter in THE LANCET of Jan. 19th, p. 212, he attacks me for hampering the important question of making the teaching of anæsthetics a

recognised part of the medical curriculum by introducing side issues. On the importance of the question I am in full accord with Dr. Hewitt, but what he terms side issues are merely further stages of the discussion. As soon as it is admitted that the medical curriculum should include anæsthetics, the next questions to be decided, and they are not side issues, are, what is the best method of instruction, and what anæsthetic is safest in the hands of the average medical practitioner? Students are already overburdened with lectures and examinations, and such means are quite inadequate to make them skilful chloroformists. This can only be done by a regular course of clinical training in a hospital. The plan which we have found to work well is to make every student give chloroform for a stated period. While he is performing this duty no one is allowed to interfere with him except the operating surgeon, but careful and accurate notes are taken of every detail throughout all his administrations. In this way he acquires the habit of responsibility, and the onlookers become familiar with the method of administration which thus becomes traditional in the school, so that when the student's turn comes to act as chloroformist he is perfectly familiar with sound principles, and very soon acquires the experience, from a large number and variety of cases, which makes him a skilled anæsthetist. In London there is no practical teaching in anæsthetics worthy of the name. In most hospitals anæsthesia is produced in a side room, the patient is only brought into the operating theatre when he is "over"; the students do not even see, or, as they ought, carefully watch and take notes of the process, and the teaching literally amounts to "handling" the ether inhaler occasionally for a few minutes. In Hyderabad we find a month of clinical training more than sufficient to render the average student capable of administering chloroform, the only anæsthetic we use, with a safety which is unattainable even by ether. This is clearly demonstrated by our statistics which show no deaths in dental operations under chloroform during the last 15 years, while those of Dr. Hewitt show that in the same period there were in Great Britain 10 deaths from the other anæsthetics which he advocates in preference to chloroform.

Table of Dental Anæsthetic Mortality (Compiled From the Statistics of Dr. Hewitt and Lieutenant-Colonel E. Lawrie, I.M.S.).

Statistics.	Locality.	Period.	Mortality. From chloroform.	Mortality. From other anæsthetics.
Dr. Hewitt's	Scotland	15 years.	12	2
	England and Wales (excluding London)	15 years.	15	6
	*London	15 years.	—	2
Lt.-Col. Lawrie's	Hyderabad	15 years.	—	—

* Chloroform was seldom if ever used in London.

These figures should be clear proof that chloroform properly administered—i.e., on Syme's principles and in the Hyderabad method—is the safest anæsthetic, and if we in Hyderabad can teach the average student and nurse to be thoroughly efficient in a month there is no reason why the average English medical student, who will eventually become the average practitioner, should not attain the art in an even shorter period. In fact, not only the average medical student, but the average dental or midwifery student, is quite capable of learning the proper method of administering chloroform. If this was done and it was known that chloroform could be given by every doctor and dentist without danger and with little or no additional expense—unless the patient desired to indulge in the luxury of a specialist—the result would be an enormous increase in the numbers of patients anæsthetised and an immense alleviation of suffering throughout the length and breadth of England.

Dr. Hewitt attempts to explain away our admitted success in practice in various ways but fails completely. For his ill-defined theory of the influence of cold and damp on anæsthesia he can produce no scientific evidence. Would he venture to assert that chloroform is more dangerous at Lahore in the cold weather with a mean temperature of, say 45° F., than in the hot weather when the mean temperature is over 100°? Is it less risky in Simla with an altitude of 7,00 feet than in Calcutta which is almost at sea-level; in Jerusalem than in Jericho? Personally I have never found any difference was caused by variations of temperature or humidity, or even by the charge from England to India. Nor are we, as he insinuates, afraid to use chloroform properly. Certainly our doses are proportioned to the needs of our cases. To produce complete anæsthesia or narcosis in every case of tooth extraction is to abuse the drug and cause unnecessary inconvenience, and perhaps sickness, to the patient. On the other hand, we do not habitually endanger our patients' lives by pushing chloroform "beyond the point where the corneal reflex disappears," which is the system Dr. Hewitt advocates. When that point is reached the patient is completely narcotised, and to push it beyond it is to keep him on the very verge of being overdosed, to approach if not to enter the region of danger. But the assertion that we do not produce complete anæsthesia when the operation renders it necessary is as untrue as it is ridiculous, and I should like to know Dr. Hewitt's authority for the statement. Nor, again, do we rely on the special gifts for anæsthetising with which Dr. Hewitt so generously credits me. I may say that I rarely give chloroform personally; at my operations I do the surgeon's work, and leave the anæsthetising to students and nurses of no special endowments. Yet my record in surgical as well as dental operations is, with one regrettable exception, unbroken, and it is they who have kept it so, just because they have had clinical training in the right method.

Moreover, the value of our methods must, I submit, be judged by our own statistics, which are of real scientific value, as each case included represents a uniform plan of administration, and not by the loosely compiled figures from which Dr. Hewitt draws the illegitimate inferences which form the latter part of his letter. He assumes in them that in all operations in Scotland, in the 15 years from 1880 to 1895, chloroform was administered on Syme's principles and the Hyderabad methods, and in all operations in England on other principles and methods, and he urges that the high dental anæsthetic death-rate in Scotland condemns our position. In the first place, Syme's principles are by no means universal in Scotland nowadays and the improved Hyderabad methods are almost unknown. Besides, are not many English practitioners trained in Edinburgh? Have not several Scottish practitioners gone out from the London hospitals? May not some of the others have hearkened to the voice of Professor Annandale, who teaches London methods from Syme's chair? What was the method adopted in the Scotch hospital to which Dr. Hewitt refers as having nine deaths in one year? When did these accidents occur? In fact, locality is no proof of the method adopted, and as the statistics are based on a definition of method by locality they are valueless. Dr. Hewitt's arguments are, however, worthy of their foundation. What is the use of calculating, as he does, the ratio of deaths to population and not to the operations in which the various anæsthetics were administered? The latter is the only percentage of value, and even then the method of administration must be carefully specified before figures can tell either for or against any particular plan. Dr. Hewitt's conclusion is a fitting climax. It is that I disregard the risks of chloroform. Carelessness of life is a strange accusation to bring against me, when the method I advocate in the hands of students and nurses has in 15 years caused no death in dental operations, while Dr. Hewitt's have on his own showing produced "*only* 23." I can assure him that I am fully alive to the risks to which his methods subject his patients, and that the only thing I do disregard and utterly deny is the direct action of chloroform on the heart, behind which he and his fellows shield themselves and the disastrous results of their teaching.

In conclusion, I have great pleasure in giving Dr. Hewitt information on a point on which he is apparently ignorant. Although there is no coroner's inquest in Scotland there is an efficient substitute in the inquiry before the procurator fiscal, and it is no more likely that accidental deaths under chloroform escape notice in Scotland than in England. Be this as it may, unless and until it is shown that the Hyderabad methods were adopted in each case it is difficult to understand how Dr. Hewitt's position could be strengthened by a fuller record of the chloroform deaths in Scotland, any more than it would be by a more complete record of the deaths from ether which unquestionably escape notice in

London where coroners' inquests abound. Both would prove that his position is an absolutely false one, brought about by the deplorable attitude which he and his fellow anæsthetists still maintain towards the work of the Hyderabad Commission. Dr. Hewitt affects with some show of confidence to shelter himself behind the "scientific world" in this matter, but even he cannot have failed to notice that, though the world of science is particularly well able to speak for itself, it has been singularly reticent on the subject of anæsthetics ever since the Cambridge contingent of its representatives cut such a very poor figure at the great meeting of the British Medical Association in Montreal.

I am, Sirs, yours faithfully,

March, 1901. EDWARD LAWRIE.

STATISTICS OF OPERATIONS ON THE KIDNEY.

To the Editors of THE LANCET.

SIRS,—In an endeavour to make a collection of renal operations performed up to the end of the last century I am desirous that the statistics should be as complete as possible and made to include not only those cases the records of which are known, but also unpublished cases. May I therefore venture through your columns to ask operators to assist me by sending to me a complete list of their operations up to Dec. 31st, 1900, giving particulars in the following order:—(1) Number; (2) date of operation; (3) name of operator, and if the case has been published, where; (4) sex and age of patient; (5) nature of operation; (6) diagnosis of disease; (7) duration of disease; (8) diseased condition as ultimately determined; (9) immediate result; and (10) ultimate result.

Fourteen years ago I made a similar appeal and in response received records of a large number of valuable unpublished cases, also details as to the ultimate result of many others the earlier history of which had been made known. Encouraged by the hearty cöoperation formerly accorded I now appeal to a greatly increased field of workers for help in demonstrating the position to which renal surgery has attained. I am, Sirs, yours faithfully,

DAVID NEWMAN.

Royal Infirmary, Glasgow, March 21st, 1901.

P.S.—Schedules will be supplied on application to my resident assistant at the Glasgow Royal Infirmary.—D. N.

"THE ORGANISATION OF THE PROFESSION."

To the Editors of THE LANCET.

SIRS,—I should like to say a few words on the above subject which is introduced in THE LANCET of March 23rd, p. 894, by "A General Practitioner." It is over two years ago since the medical men practising in the eastern valley of Monmouthshire found it necessary to organise themselves into an association chiefly with the object of getting better pay, and to that end a circular was printed and sent to the various collieries and works by the surgeons attending them. Up to that time the medical attendant was paid at the rate of 2*d*. in the £ of the weekly earnings, and the medical attendant was to provide medicine, medical attendance, undertake all accidents and operations, and provide appliances to the workman, his wife, and family. Midwifery was the only thing paid specially for, and that was expected to be attended for a fee of 10*s*. 6*d*. irrespectively of the nature of the case or the distance away. Immediately the notices went forth to the various works from the doctors asking for the advance of 1*d*. in the £ an angry growl rose from the mass of workmen and many meetings were held, the collier especially being the most dissatisfied and endeavouring to make a good bargain for himself by stating that if he advanced the doctor's pay 1*d*. in the £ he must have a *quid pro quo* in the shape of linseed meal, cod-liver oil, and free midwifery, thoroughly disregarding the fact that we had attended all through the five months' coal strike without a farthing remuneration and, as we had pointed out in our circular letter, that the advance in assistants' salaries and other things connected with the profession made it imperative that our pay should be increased. We made up our minds distinctly that we could not supply cod-liver oil and linseed-meal, neither would we give free midwifery, although we knew that in the western valley and some other places in the South Wales coal district these three things had been conceded, as well as free attendance on venereal diseases. We had met the British workman with his own weapon and, strange to say, he did not appreciate it—viz., a trade-union, and the only thing we had to fear was the introduction of strangers into our midst. This was threatened, and one of our members acting rather precipitately resigned. His resignation was accepted and an advertisement was inserted in a local paper for a successor to his appointment, and, notwithstanding the fact that by a counter advertisement we asked applicants to communicate with our secretary before applying for the post, no less than 25 medical men made application for the position, which I may add was only a very small affair. In the organisation of the profession what is required is that medical men, and the junior members especially, should band themselves together in one union to resist the great tendency there is to reduce our remuneration. The junior members should stand by and allow us to fight the battle which in the years to come will be for their benefit. During the past two or three years the junior members have benefited in a financial way by the action of their seniors, and if they will only help us by keeping aloof from applying for posts they know to be vacant in consequence of some disagreement with the original holder until they know the exact position of affairs they will benefit the profession at large and raise our status socially. I may add that after several months of hard fighting we gained the 1*d*. advance we asked for without supplying free cod-liver oil and linseed-meal, but we had to make a concession with respect to the midwifery, inasmuch as we agreed to attend any workman's wife in her confinement for the usual half-guinea providing we were engaged beforehand and a proper nurse were in attendance; but, at the same time, if any woman was being attended by a midwife and any difficulty arose that she could not manage we agreed to give free attendance. This was called emergency midwifery. This arrangement has now been going on nearly two years and works very well.—I am, Sirs, yours faithfully,

S. BUTLER MASON, M.R.C.P. Edin., &c.,
President of the Eastern Valley Medical Association, Monmouthshire.

Pontypool, Mon., March 20th, 1901.

DEAFNESS IN BOARD SCHOOL CHILDREN.

To the Editors of THE LANCET.

SIRS,—The question of diminishing the amount of deafness in children through the agency of school boards having been raised in THE LANCET of March 16th, perhaps the method adopted in the Halifax schools, though without any claim to originality, may have some interest. Each class is visited by the medical officer for this purpose, and all "mouth-breathers" and children thought by the teachers to be deaf are examined by him. Printed notices are subsequently sent to the parents of those suffering from adenoids advising them to seek medical treatment either privately or in hospital. In a few cases of otorrhœa a similar notice is sent, but in the majority of these cases the parent is simply warned of the dangers of the condition and advised to syringe the ears daily. Doubtless it would be better to have these cases also under medical supervision, but now and until the poorer classes regard otorrhœa more seriously advice to this effect would be largely thrown away and the moral effect of the notices gradually destroyed. I may add that with the increased attention paid to breathing exercises and the repression of mouth-breathing it is hoped that the number of adenoid cases will be much diminished. The method is no doubt crude but it certainly results in the "cure" of a fair number of cases and a great diminution in the number of offensive aural discharges; it gives rise also to an increased disposition on the part of parents to seek treatment for their children in ear affections which they formerly regarded as of little moment or beyond remedy, and while there are obvious objections to an educational body taking up the actual treatment of disease the education of children or their guardians in the importance of personal hygiene may fairly be claimed as one of their duties.

I am, Sirs, yours faithfully,

T. H. HUNT, M.D. Lond.,
March 20th, 1901. Medical Officer to the Halifax School Board.

BEER-POISONING.

To the Editors of THE LANCET.

SIRS,—Those who drink beer have been rather startled of late by ascertaining that there are disease and death in this

wholesome beverage, arising from the introduction of arsenic in its manufacture. But it is not equally well known that there are many sufferers from lead poisoning who have to thank their beer for this often lamentable disease arising in its distribution. I have had a poor woman in hospital for many weeks, not only suffering from dropped wrists, but also from paralysis of both legs, from this cause. The lead is introduced by the employment of lead pipes to convey the beer from the beer-barrel to the beer-pump. Woe betide the unfortunate beer-drinker who frequently has the first "draw" in the morning under these circumstances, for lead-poisoning is sure and death not unheard of. Lead pipes should be prohibited for such a purpose.

I am, Sirs, yours faithfully,

Rugby, March 30th, 1901. CLEMENT DUKES.

THE CASE OF AN ELECTION.

To the Editors of THE LANCET.

SIRS,—In September last a vacancy was advertised for a physician to out-patients at the above hospital. With two other candidates I applied for the post. On Nov. 14th the secretary of the hospital wrote to me that the Committee of Management had elected me. My day of attendance was settled, I took up my duties in the following week, and I intimated to you the fact of my election, which you duly announced. I was subsequently instructed to attend at physicians' operations on two days a week and on emergency calls, which I proceeded to do, assisting at the request of individual members of the staff. I further undertook by request additional temporary out-patient duties. Proofs of the hospital out-patient letters with my name printed thereon were submitted to me for final approval and correction and on Dec. 10th I attended a meeting of the Medical Committee, of which the secretary of the hospital had given me official notice.

Now comes the extraordinary sequel. On Dec. 12th the secretary of the hospital wrote informing me that the minute referring to my election was not confirmed, that the matter therefore stood over for the present, and that he understood a member of the staff would write to me respecting my attendance. On the same day the secretary of the Medical Committee wrote that he had been asked by his colleagues to inform me that as my election was not confirmed it would not be necessary for me to attend in the out-patient department or at operations. In consequence of these letters I at once ceased to do so. On Dec. 21st the secretary of the hospital wrote in reply to me that the non-confirmation of my election left the post vacant; that therefore I was purely a candidate as before and as such not entitled to take part in the work of the institution.

On Jan. 23rd, 1901, he wrote that in consequence of legal opinion the Committee of Management had resolved to take up the election at the point of the reception of the Medical Committee's report on Oct. 23rd. Though I have received no official intimation, I understand this took place on Feb. 12th, resulting in the election of one of the other candidates. From the preceding facts, it must be admitted that I am placed in a very anomalous position. I received every proof anyone could possibly expect to receive of my appointment as physician to out-patients at the Samaritan (Free) Hospital for Women and Children. On the other hand, I am led to believe that a fresh election has taken place, and another appointed to my post—and that through no fault of mine.

I am, Sirs, yours faithfully,

JOHN A. SHAW-MACKENZIE, M.D. Lond.

Grosvenor-street, W., April 2nd, 1901.

"THE ELIMINATION OF ARSENIC THROUGH THE HAIR."

To the Editors of THE LANCET.

SIRS,—The paper on the Elimination of Arsenic through the Hair in THE LANCET of March 23rd, p. 854, has recalled to my mind some experiments which I made many years ago in conjunction with the late Dr. Bence Jones on the rapidity of the diffusion of substances into, and out of, the animal tissues. Among other substances, we experimented with chloride of lithium, the diffusion of which into, and out of, all the organs and tissues of the body can be traced with remarkable facility. At first I had come to the conclusion that lithium diffused also in the hair. On consideration, however, it struck me that there were at least three possible sources of the lithium I had found in the hair: (1) direct diffusion into the hair; (2) absorption from the perspiration of the skin of the scalp; and (3) absorption from the hand passed through the hair. Accordingly, I carefully isolated some locks of hair by wrapping them in waterproof material, thus preventing absorption by either of the last two possible means. In the hair thus protected I never found lithium, and thus came to the conclusion that lithium did not diffuse directly into the hair. My experiments were not carried on long enough to decide whether or no lithium could be found in the hair grown during the time lithium was taken, as that question lay outside the scope of the inquiry. The question therefore arises, Where was the arsenic found, in the old or only in the new growth? If in the former, were any experiments similar to that described, made?

I am, Sirs, yours faithfully,

Howick-place, S.W., March 27th, 1901. A. DUPRÉ.

To the Editors of THE LANCET.

SIRS,—With reference to the interesting paper on the Elimination of Arsenic through the Hair by Dr. E. Knecht and Mr. W. F. Dearden and your comments thereon[1] may I be allowed to point out that this has been known for some years? As far back as 1891, at any rate, Professor Brouardel in his lectures on medical jurisprudence, insisted on the importance of examining the hair and nails of exhumed bodies for arsenic in suspected cases of poisoning. For all I know the fact that arsenic is stored up in the hair and nails may have been observed long before 1891. Dr. Knecht and Mr. Dearden's independent researches, however, are valuable in directing attention to a point of medico-legal importance. I am, Sirs, yours faithfully,

GEORGE PERNET.

Upper Gloucester-place, Baker-street, N.W., March 25th, 1901.

To the Editors of THE LANCET.

SIRS,—With respect to the article on the Elimination of Arsenic through the Hair, contributed to THE LANCET of March 23rd, p. 854, by Dr. E. Knecht and myself, I should like to make an important correction. In line 31, column 1, instead of "Scales are but rarely met with," one should read "*Scabs* are, &c." It is well known that scales are not at all uncommon in cases of chronic arsenical poisoning. I very much regret that I should have failed to notice the error when correcting the proof.

I am, Sirs, yours faithfully,

Crumpsall Park, Manchester, March 28th, 1901. W. F. DEARDEN.

THE

ORGANISATION OF THE PROFESSION.

(FROM OUR SPECIAL COMMISSIONER.)

(*Continued from p. 821.*)

The Formation and History of the Gateshead Medical Association.—Defeat of the Attempt by the Friendly Societies to Create Female Lodges.—Increase of Subscriptions Paid by Adult Males.—The Subscription to Private Family Clubs Increased.—Insurance Companies Kept at Bay.—Proceedings against Unqualified Assistants.—Absolute Unanimity Secured.—Active General Propaganda Work.

IN describing the efforts made to organise the members of the medical profession in the counties of Durham and Northumberland the history of the Gateshead Medical Association should have been given first had I taken these organisations in their chronological order. On the other hand, the Northumberland and Newcastle Medical Association should have come last instead of first on the list, for it was constituted at the most recent date. But there was practical utility in calling attention at the earliest moment to those localities where a struggle was actually taking place. Now, however, that these more urgent events have been related it remains to render honour to whom honour is due

[1] THE LANCET, March 23rd, 1901, pp. 854 and 878.

by giving the history of the parent society. The first historical date in regard to the organisation of the profession in the counties of Durham and Northumberland is Sept. 22nd, 1896. On that occasion the Gateshead practitioners were invited to meet in the private house of one of their number to discuss what steps, if any, should be taken to elect Direct Representatives to the General Medical Council. Out of a possible attendance of 36 practitioners 18 were present and they agreed to take action in regard to the constitution of the General Medical Council. Then towards the end of the meeting someone inquired whether it would not be advisable to try to form an organisation for the special purpose of dealing with ethical and economical questions. This suggestion was so warmly approved that a small temporary committee of four was then and there appointed so as to prepare a scheme and to convoke a general meeting of the entire profession. This meeting took place on Oct. 6th following and 18 practitioners attended. The proposed rules then submitted were very short and simple, but they nevertheless gave rise to a lengthy discussion, and this somewhat ardent debate served to reveal the need of an organisation on the lines proposed, and it also showed the eagerness that prevailed among the Gateshead practitioners to take part in such a movement. No line of policy was indicated beyond the decision that the new association was not to be a scientific society but was to deal exclusively with economical and ethical questions. Even at this early period it was agreed that there should be a black-list, and that when the association adopted a line of policy any member who did not carry out such a policy should be expelled. After a long discussion the rules were adopted and the Gateshead Medical Association was formally constituted. Dr. William Mearns was elected its president and Dr. Alfred Cox its honorary secretary and treasurer, and one member was added to these two so as to form an executive. For about two years these three gentlemen did all the executive work of the association. Simplicity, the avoidance of all complications in management, was their constant aim.

The general situation at that time—namely, towards the end of the year 1896—was not complicated. The town was not troubled by provident dispensaries or medical aid associations. There was, however, the threat that small business insurance companies including medical aid as a sort of decoy duck might be introduced at Gateshead, and the friendly societies were anxious to create female lodges. The first line of policy agreed upon was that the association should resist any attempt to make matters worse. Thus, early in the proceedings a resolution was passed by which all the members pledged themselves not to accept the post of medical officer for a female lodge of any friendly society. Then at the second meeting held by the association, on Dec. 1st, 1896, it was decided not to take any juvenile lodges unless the juveniles paid at the same rates as the adults. This was a bold decision, for at Darlington and other neighbouring towns there were juvenile lodges in existence where the children were paid for at the rate of only 1*s.* 6*d.* per annum.

At this time the Rechabites had approached their medical officer and asked him to take the families of the members for 2*d.* per week, which, together with the 3*s.* per annum the member himself paid, would make 11*s.* 8*d.* per annum for the entire family. These families also were to be accepted without any sort of medical examination and might therefore include chronic invalids. The medical officer in question had refused these terms and had consequently been discharged. This constituted the first practical problem with which the newly-formed medical association had to deal. 23 members were present when this question was discussed and they unanimously adopted a resolution stating that, in view of the fact that the position of medical officer to a lodge was accepted mainly as a means of securing an introduction to the families of the members, no member of the association should consent to act as medical officer to a lodge which had a family club attached to it. The Rechabites now set to work and canvassed all the medical practitioners established at Gateshead. Some half-dozen enthusiastic members of the Gateshead Medical Association, however, had been even more active. Between the first and the second meeting held by this association they had sent circulars or paid personal visits to all the practitioners in the town and had succeeded in enrolling every medical man as a member of the association, and consequently these all rejected the overtures made by the Rechabites. More than this, the Rechabites having discharged their medical officer, the rule that no new appointment was to be accepted on the old terms now came into force; therefore not only did the Gateshead practitioners refuse to have anything to do with the family clubs but they would no longer attend the adult male Rechabites for 3*s.* a year as formerly, and the latter were compelled to pay their new medical officer 4*s.* a year. The fact that they did not return to their old medical officer did not cause any difficulty, as the latter was not anxious to continue this sort of work—indeed, their new officer was also tired of it at the end of three years and resigned his office. Having thus again to change their medical officer the Rechabites made another effort to introduce family clubs. They thought that after a lapse of three years the discipline of the medical association might have become less rigorous, and at first it seemed as if this was the case, for a practitioner did accept their offers. Of course remonstrances were made, and this gentleman explained that he had forgotten that the matter had been discussed three years previously, but he would at once conform to the decision then taken. He therefore wrote to the Rechabites and gave in his resignation, explaining that he could not act against his fellow-members of the profession. In face of this failure the Rechabites definitely abandoned all hope of establishing family clubs and kept the medical officer they had just appointed, paying him 4*s.* to attend only to their adult male subscribers.

To return to the meeting held on Dec. 1st, 1896. Mr. J. Todd then introduced the whole question of friendly society work, pointing out that the 3*s.* per annum that their members paid for medical attendance was not enough. All agreed to this, but there was considerable disagreement as to what should be done. The more buoyant were for immediately organising a general strike against the friendly societies, while others were more timid and suggested careful and patient preparation, and fears were expressed that the friendly societies would establish a medical institute and employ a medical man exclusively as their servant. Ultimately it was decided that a circular should be sent to all the friendly societies asking them to appoint a deputation to discuss the question of remuneration in a friendly manner with the representatives of the medical profession. Then it was discovered that there was no list existing of these societies and no one knew how many there were. Consequently, it was decided that everyone should send circulars to those societies with which he was personally acquainted and thus it was ultimately ascertained that there were 92 or 93 lodges in the town. It was subsequently agreed to urge that medical officers should not be dismissed without due notice. As matters then stood medical officers were re-elected every six months, but if not re-elected they were summarily dismissed.

It was in March following that 60, or about two-thirds, of the lodges sent delegates to meet the representatives of the medical profession. The other lodges took no notice of the circular which they had received. There were nine medical men present and about 120 delegates of the friendly societies. The latter listened carefully to the statements made by the medical practitioners. The discussion that followed was amicable, but the men firmly adhered to their belief that 3*s.* a year was a sufficient payment. Several among them, it is true, recognised that by itself it would be insufficient, but that this was more than compensated by the advantage of attending for ordinary fees the families of the members. It was, however, admitted that when the medical officers complained of being dismissed without notice they had brought forward a genuine grievance.

Subsequently the friendly societies held a meeting among themselves to discuss the points raised by the medical men, and they then decided in a formal manner that they could not see their way to increase the subscription for medical attendance to 4*s.* In face of this refusal the members of the Gateshead Medical Association were about evenly divided, one half urging a strike while the others wanted to follow a more prudent course. The latter policy was adopted and the members contented themselves with signing a pledge that if a lodge changed its medical officer or a new lodge came into existence they would not accept the new appointment for less than 4*s.* Some of the members, however, decided to ask for the increase at once. Some were successful, some failed altogether, and some obtained half of their demand—namely, an increase from 3*s.* to 3*s.* 6*d.* per year instead of 4*s.* Altogether there are now of

the old and new lodges about 10 or 12 which pay the 4*s*. Some of the younger practitioners objected to the policy pursued on the ground that it gave them no prospect of getting an appointment, as the lodges would prefer to retain their old medical officers at 3*s*. rather than to engage a new medical officer at 4*s*. The young practitioner and the newcomer thus seemed to labour under a double disadvantage. There was the natural and legitimate disadvantage of his position as a junior practitioner and the artificially imposed disadvantage that he must charge 4*s*. for work which his seniors did for 3*s*. Fortunately actual experience showed that when a lodge was dissatisfied it was not the question of having to pay 1*s*. more that prevented them from changing their medical officer. The normal rate of vacancies was not altered, though every such change had to be followed by increasing the annual subscription from 3*s*. to 4*s*.

The next step taken was to establish a hard-and-fast rule where none had previously existed that a charge of at least 6*d*. should be made for all extra certificates given. During the year 1898 another lodge had occasion to change its medical officer. As a medical practitioner had just established himself in the town only a few days previously and did not even know that the medical men of Gateshead had formed an association the lodge approached him. He was only just starting practice, so he willingly accepted the lodge at the lower terms; but he was soon informed of the situation and, to his honour be it said, he at once resigned his post, saying that he would never do anything that was against the interests of his own profession. The lodge, thus disappointed, now sought for and found another weak point in the armour of the Gateshead Medical Association. One of the members of the association had a branch practice at a colliery outside Gateshead. His assistant started practice on his own account near this colliery, and tried to get the miners to be his patients. This was considered to be so unprofessional that several members of the Gateshead Medical Association threatened to resign if this individual was accepted as a member of their organisation. Thus it happens that there is just one medical practitioner in the neighbourhood of Gateshead who is not a member of the Gateshead Medical Association. The lodge thereupon fell back upon this one practitioner, but though he accepted their terms they soon found that he lived too far away to attend properly upon their members, so that they had to give him up and were compelled finally to appoint a member of the Gateshead Medical Association and to pay him the 4*s*. This was the last attempt at resistance. On one subsequent occasion a member of the association by mistake offered to take a lodge at 3*s*. 6*d*., but, discovering his error, he at once wrote to say that he would not take less than 4*s*. In the meanwhile, however, the lodge had met and some of the members voted against him. Thus it will be seen that the workmen themselves are beginning to understand, and to approve of, the position taken up by the organised members of the medical profession. This is an important, a significant, and a hopeful incident.

The National Deposit Friendly Society sought to establish a branch at Gateshead just about the same time as the Medical Association was formed. Early in 1897 the medical practitioners discussed this society at length. Some of the members thought that it was a fair society because it did not pay a fixed yearly sum and allowed its subscribers to select their medical attendant. On the other hand, it was objected that there was no wage-limit and that the National Deposit Friendly Society appealed to tradesmen rather than to workmen. Its general introduction, it was said, would tend to lower medical fees; then it was a comparatively new society, and there was no need of yet another organisation seeking to act as an intermediary, a third party, between the medical men and their patients. It was therefore decided not to accept their terms. The National Deposit Friendly Society nevertheless sent agents who endeavoured by every means to make the medical men reconsider their decision. They proposed that the medical practitioners should charge whatever fees they thought proper and the members would pay half and the society the other half. This, however, meant that the medical practitioners must first sign the documents of the society, which would be shown to prove that the medical men approved of the institution. Finally, it was resolved that no signatures should be given and no terms accepted, and that if any members of the National Deposit Friendly Society applied for medical advice they must be treated as ordinary private patients.

The next question raised was that of the family clubs privately organised by the medical practitioners themselves who employ collectors for the weekly subscription. The terms were the same as for the surrounding collieries—namely, 6*d*. per fortnight per family. As the County of Durham Medical Union had now been formed and was moving in the matter the Gateshead Medical Association also determined to raise the subscription to 9*d*. per fortnight. One member, however, who had just bought a practice which comprised such a club, said he did not feel justified in making this increase; and an exception was made on his behalf. This was perhaps a mistake, for it tended to create a bad precedent. Still a compromise was preferred to the losing of a member who after all was not underselling any of the other members, for he agreed not to take new subscribers at less than 9*d*. As these subscribers had no organisation of their own they could not resist. If they refused to pay the 9*d*. they could not find any other practitioner who would accept less, so the increase was easily obtained. For one out of the three or four Gateshead practitioners who attend to the neighbouring collieries that meant an increase of £150 a year to his income; and thus it became more and more evident that it was well worth while to unite and to organise the members of the profession.

Early in the year 1898 the Gateshead Medical Association resolved that it would have nothing to do with medical aid organised by financial insurance companies. All its members who had appointments in the service of these companies were called upon to give them up. This they did and without hesitation; but this did not entail any serious loss as fortunately these companies had only a feeble hold upon the town. At the same time, two or three quarrels broke out between some of the practitioners of Gateshead. The association at once took up these matters of dispute, argued out all the causes of disagreement, brought the disputants together, persuaded them to shake hands, and so put an end to all further wrangling. Then there were two cases in which the association was able to bring in the Medical Defence Union. One of the members was ill and he had reason to suspect that his locum-tenent, whom he had paid as a fully qualified assistant, was nevertheless not qualified. On leaving this assistant put up his plate in another part of the town. He was therefore invited to join the association, but refused. With the aid of the Medical Defence Union it was ultimately found that he had no qualification but was personating his brother who was qualified. A warrant was taken out for his arrest, but he escaped before it could be served on him. At about the same time two members of the Medical Association complained that a practitioner had been imported by some miners to attend to their families for 6*d*. instead of 9*d*. per fortnight and that he was employing an unqualified assistant. This assistant was living at a distance of a mile and a half from his employer and was doing full branch work, including midwifery. Again with the help of the Medical Defence Union, the practitioner was brought up before the General Medical Council and was severely reprimanded.

There is sometimes a feeling against the principle of preparing a black list of patients who do not pay their medical bills. But at Gateshead this list has proved a great success and there have been two editions. It is only sent to those who contribute to it and some of the practitioners do not take the trouble to look through their books and to send in names. Nevertheless, the amount of bad debts has been very much reduced by the black list, even though it be but an incomplete list.

On one or two occasions the Gateshead Medical Association has approached the corporation in relation to sanitary matters. Thus it memorialised the local authorities on the question of a public disinfector and urged that a disinfecting station should be established. This was ultimately done and the town council expressed its thanks to the Gateshead Medical Association for the advice that it had given on this subject. Such medical organisations might certainly greatly assist the medical officer of health in bringing pressure to bear so as to induce local authorities to take in hand necessary sanitary reforms. The Gateshead Medical Association also memorialised the General Medical Council so as to obtain clearer indications as to the position taken up by that authority in regard to unqualified assistants. The rule on this subject is open to several

interpretations. The resolution of the General Medical Council, the Gateshead practitioners maintain, admits pupils, midwives, and dressers acting under supervision. The members of the Gateshead Medical Association showed by their discussions that they did not understand the practical bearings of this resolution, and the formal reply which they received from the General Medical Council did not help to enlighten them. They are all opposed to the legalising of the position of midwives and the granting of diplomas to opticians. Then the Gateshead Medical Association managed to organise a meeting at which the Direct Representatives of the profession on the General Medical Council were present and discussed various subjects, but more especially the question of registering midwives. This meeting was the first occasion on which the three Direct Representatives for England met on the same platform. The meeting took place before the Conference on Medical Organisation which met at Manchester in May, 1900. At this latter gathering the Gateshead Medical Association was well represented and introduced two of the principal resolutions, which pressed the need for concentration and urged that the constitution of the British Medical Association should be so reformed as to enable it to group together the medical organisations that deal with economical and ethical problems. The Gateshead Medical Association also had occasion to make representations to the borough and county members of Parliament with regard to medical questions that were about to be discussed in the House of Commons. Finally, when the war broke out the members of the association offered their services gratuitously to the families of soldiers, sailors, or reservists who were in indigent circumstances, and one of the members went out to South Africa as a civil surgeon.

While all this work of organisation was going on several practitioners came and established themselves at Gateshead. Since 1896 there have been eight or nine new-comers. As soon as they arrive the secretary calls upon them, gives them a copy of the rules, explains the necessity of organisation, and relates all that has been accomplished and the advantages that have resulted therefrom. This has been done so well and so promptly that all the newly established practitioners have joined the Gateshead Medical Association, so that now the society has 45 members, and there is only the one practitioner who has been mentioned above who is not enrolled. The cordial relations prevailing among the members have been much encouraged by paying due attention to the social side of the organisation. Four annual dinners and two picnics have been held, and everything is done to promote conviviality and friendly social intercourse, thus seeking to obliterate the feelings of competition and rivalry which tend to disunite the members of the profession.

Apart from its own local work the Gateshead Medical Association has been very active in propagating its principles in the surrounding districts. From Australia, America, and many British towns letters have been received asking for advice and for copies of the rules, which have been always readily forwarded. Sometimes the president, sometimes the secretary, and, on other occasions, both president and secretary, have gone to inaugural meetings when, in some other locality, efforts were made to form a medical union. The practitioners at South Shields were the first to organise a society after that of Gateshead had been constituted, as has been already explained, and their earlier meetings were attended by Dr. Cox from Gateshead. The energetic secretary of the Gateshead Medical Association also helped to form the Newcastle Medical Ethical Society and the Mid-Tyne Medical Association at Wallsend. Both of these societies have now been merged in the Northumberland and Newcastle Medical Association. Altogether the Gateshead Medical Association has shown that its members possess a broad grasp of the interests at stake and that they are not tied down by a narrow feeling of parochialism, but that they are ready to take their part in a general as well as in a purely local movement. Thus the association not only participated in the Conference on Medical Organisation held at Manchester but the secretary, Dr. Cox, was a member of the International Congress of Deontology and Medical Ethics held at Paris last year. Undoubtedly the medical practitioners of Gateshead have set a good example. They have succeeded in securing practical unanimity, they have been prudent in their policy, and they have been eminently successful in their efforts.

Gateshead, March 25th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Ladies' Charity and Lying-in Hospital: The School of Midwifery.

FROM the last annual report it appears that the number of cases admitted to the hospital during the year 1900 was 204. In eight of these the patients were single girls (first cases) admitted under the new rule. During the year there were five deaths of mothers in the districts and one in the hospital, and of these six deaths only one was due to maternity. 24 students took their practical midwifery course with the charity during the year—an evidence that the arrangements made by the board of the hospital with University College to provide for this branch of the medical curriculum is meeting the end in view. Formerly Liverpool students were compelled to take out their course of practical midwifery in Dublin. 35 pupil midwives were trained in the School of Midwifery during the year and received certificates. 18 monthly nurses were trained by the matron in the hospital and received certificates of competency. The expenditure for the year exceeded the ordinary income by £694. Comparing the present position of the charity with that of 10 years ago it appeared that while great advances had been made in the treatment of the patients, both indoor and outdoor, in the training and efficiency of the staff of midwives, the provision of extra nursing for patients, and the benefits conferred on the community through the training of medical students, midwives, &c., the subscriptions and donations had decreased and the charity had now to face each year a serious deficit which had to be met by drawing upon invested funds. The charity is one which ought to appeal strongly to the public; it has kept well abreast with the times and has done valuable work.

Liverpool and the Prevention of Tuberculosis.

At the second annual meeting of the National Association for the Prevention of Consumption and other Forms of Tuberculosis held in London, the Earl of Derby, who was in the chair, alluded to the great progress which had been made in Liverpool in regard to the prevention of tuberculosis. The corporation had within the last month adopted voluntary notification of phthisis and had also established depôts for the supply of sterilised milk. Two sanatoria for open-air treatment were in course of erection and one, it was hoped, would be ready for patients in July. The council of the association drew attention to the satisfactory result of the three months' experiment recently made by the three Liverpool boards of guardians, which had adopted the plan of making it a condition of granting outdoor relief that the family should remove to more wholesome quarters and had adopted simple but efficient precautions for the prevention of infection. To meet the cost of removal and also of more adequate nourishment for the patient they granted relief at a special scale.

The Liverpool Infirmary for Children.

At the annual meeting of the subscribers to the Infirmary for Children the chairman made the startling statement that the building was found to be insanitary and that there was no possibility of improving it so as to enable it to conform to modern ideas of hospital construction. One of the most serious drawbacks was the existence of the out-patient room in the same block as the wards which were in consequence exposed to the risk of infection in many ways. The committee therefore recommended the erection of a new building and the separation of the out-patient department from the main building.

The New Botanical Laboratory for University College, Liverpool.

The new botanical laboratory (the munificent gift of Mr. W. P. Hartley) in course of erection in Brownlow-street is rapidly approaching completion and will be formally inaugurated in October next. The design is highly artistic and the new laboratory will be a handsome and imposing addition to the existing buildings in Brownlow-street, most of which are in connexion with University College.

The Sanitation of West Africa.

Mr. Chamberlain received a deputation from the Chambers of Commerce of London, Liverpool, and Manchester and the Liverpool School of Tropical Medicine, at the Colonial Office,

on the sanitation of West African coast towns. The Liverpool School of Tropical Medicine was represented by Mr. Alfred L. Jones (the chairman), Professor Rubert W. Boyce, Major Ronald Ross (late I.M.S.), Dr. H. E. Annett, and Dr. R. Fielding-Ould. The points submitted to Mr. Chamberlain included proposals that the governments of the various colonies on the west coast of Africa should be invited to prepare schemes, with estimates, for the complete organisation of sanitation in the coast ports in the vicinity of quarters permanently occupied by any considerable number of Europeans, especially with regard to (1) removal and disposal of refuse, (2) complete surface drainage of the soil and removal of bush and undergrowth, (3) removal of native huts where their presence is a menace to the health of Europeans, and (4) the institution of sanitary regulations for observance by the public within the areas indicated above; that at the same time a sanitary commissioner, or sanitary commissioners, should be appointed by the Colonial Office to visit repeatedly all the said colonies and to report to the Secretary of State the condition of sanitation in each colony and the steps being taken to improve it by the local authorities; that where new settlements are being planned quarters for Europeans shall be arranged as far as possible on the Indian cantonment model; and that special regulations shall be made to prevent the overcrowding of such cantonments by the general public. Mr. Chamberlain, in reply, said that the questions of water-supply, sewerage, and the other points to which his attention had been called were receiving the careful consideration of the Government. The question of cost was a serious one, to which they must give anxious consideration, unless they were to get into financial trouble. The points suggested meant no less than a gigantic system of sanitary inspection. If the Government sent out a purely expert scientific expedition they would be handing over practically the decision upon the cost, which was really a point for laymen. Mr. Chamberlain proposed, therefore, that the three chambers of commerce should each appoint one of their number to be a member of such a commission and that a representative from the Colonial Office should accompany it, perhaps as secretary; in addition to the three gentlemen they should also have a scientific expert whom they would nominate. If that view were accepted by the deputation he would refer to this small commission certain questions, the first and most important of all being the sanitation of the colonies and its cost.

March 26th.

WALES AND WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

Bristol Isolation Hospital.

THE medical officer of health (Dr. D. S. Davies) has presented a report to the Bristol Health Committee urging the importance of providing additional accommodation at the isolation hospital at Ham Green. Although the population of Bristol is approaching 350,000 there is provision in the city hospitals for isolating only 100 adult patients, and there ought to be accommodation for at least 300. It is of interest in this connexion to record that until 1886 the Poor-law guardians of Bristol held themselves partially responsible for isolating infected persons and at that time there was accommodation for isolating at one time 120 persons, so that there is actually less accommodation at the present time than there was 15 years ago. The guardians now pay the city authorities £300 a year, in return for which all infected pauper patients are treated in the city isolation hospitals. Bristol cannot afford to be behind its neighbours in this respect. Cardiff since the end of last year has been very well equipped and has a much larger hospital than Bristol to serve a much smaller population.

Sanitation of the Welsh Wells.

The popularity of the Welsh wells is increasing year by year, but it will not continue to do so unless some of the sanitary authorities mend their ways. Dr. W. W. B. Fry, the medical officer of health of Builth, has frequently drawn the attention of the urban district council to the insufficiency of the sewerage of Llanwrtyd where the principal sewer discharges in the middle of the village into the river Irvan, and in the summer when the water is low there must of necessity be considerable nuisance caused. Now that septic tanks and bacterial contact-beds have passed the experimental stage there can be no longer any excuse for any sanitary authority allowing a stream to be polluted in the manner described by Dr. Fry in his last annual report, in which he says that it is scandalous that such a state of things should continue in a health-resort. The inhabitants of the village are to be congratulated upon having as their medical officer of health an official who is willing to speak thus forcibly.

The late Mr. R. Jeffreys Owen.

The death is announced of Mr. Richard Jeffreys Owen, M.R.C.S. Eng., L.R.C.P. Lond., of Llandovery, at the comparatively early age of 43 years. Early in the "eighties" Mr. Owen was house surgeon to the London Hospital and to the Poplar Hospital for Accidents. In 1899 he held the office of Mayor of Llandovery.

Publicans as Sanitary Inspectors.

The rural district council of Chard in Somerset recently elected a licensed victualler as one of their three sanitary inspectors, but the Local Government Board refused to sanction the appointment. In subsequent correspondence upon the matter the Board stated that it was their practice to object to licensed victuallers, house agents, and collectors of rents holding such appointments.

Gloucester General Infirmary and Eye Institution.

The annual meeting of the subscribers to this institution was held on March 28th, under the presidency of Colonel Curtis-Hayward. The medical report stated that during 1900 the in-patients numbered 1306, against 1329 in 1899. There were 8319 out-patients treated, compared with 8200 in the previous year. The financial statement showed that the ordinary expenditure amounted to £7210 and the income to £6956, leaving a deficit of £254.

Bristol Eye Hospital.

The annual meeting of the subscribers to the Bristol Eye Hospital was held on March 26th, under the presidency of the Lord Mayor. The ninetieth annual report, which was read by Mr. Richardson Cross, stated that during 1900 the out-patients numbered 4893, compared with 4975 in 1899. The in-patients numbered 256. The financial statement showed that the balance due to the treasurer had been reduced from £479 to £375. Towards the fund for the recent extension of the hospital £5016 had been received, but there still remained the sum of £1600 to be raised, for which sum the committee strongly appeal. Before the meeting the Duke of Beaufort formally opened the new extension of the hospital.

Bristol Royal Infirmary.

The annual meeting of the subscribers to this institution was held on March 26th, under the presidency of Sir Charles Cave. The medical report stated that 2986 in-patients had been admitted during 1900, compared with 3087 in 1899, and there were 38,671 out-patients treated, as against 39,883 in the previous year. 385 patients were sent to the Queen Victoria Jubilee Convalescent Home at Clifton. The financial statement showed that the total ordinary income amounted to £10,840, compared with £11,479 in 1899. The total ordinary expenditure was £14 925, against £14 393 in the preceding year. The chairman urged the necessity of increased financial help to the infirmary and added that although they had reduced the adverse balance from £13,000 to £7000 it had been done, unfortunately, by the sale of securities. Sir Charles Cave was re-elected president and treasurer for the ensuing year, a dual post which he has held for 21 years.

April 1st.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Royal Infirmary.

AT a meeting of the managers of Edinburgh Royal Infirmary held on March 25th Dr. R. Milne Murray and Dr. N. T. Brewis were elected to fill the respective posts of second and third gynæcologists to the institution. There were six candidates for the posts.

Small-pox in Glasgow.

The epidemic appears at last to be in a state of decline. The admissions during the last week show a considerable decrease compared with the last record. The authorities are taking a cheerful view of the future, and there is a general expectation that ere long the city will be reported

free from the disease. Among the various criticisms which have been made it has been suggested that the admissions to hospital have included a not inconsiderable number of revaccinated patients. Possibly this rumour has induced the medical officer in his last report to introduce some recent facts bearing on this question. It appears that among the 316 patients in hospital on March 30th there were 39 patients who stated that they had been revaccinated at one time or another, and in 36 of these the date of the operation and of sickening from small-pox was readily ascertainable. A comparison of these dates shows that in every case the interval between revaccination and sickening falls short of the normal period of incubation, so that in every instance the disease had already been contracted before the operation was performed. In the three remaining cases the attack of small-pox followed the act of revaccination at 10, 21, and 28 years respectively. The notes on these three cases are as follows: 1. Female, aged 49 years, admitted March 1st; said to have been revaccinated in 1891. One mark only, however, is visible. The case is an exceedingly mild one. 2. Male, aged 44 years, admitted March 6th. He was revaccinated Feb. 23rd, eight days before sickening. He states that he was also revaccinated successfully in 1880. The attack is of so mild a character that considerable uncertainty at first existed as to the accuracy of the diagnosis. 3. Male, aged 36 years, admitted Feb. 23rd; said to have been revaccinated 28 years ago and two marks are visible. The attack resembles in mildness that of the previous patient. These facts and figures will do something to calm the public mind in face of the statements of the anti-vaccinationists. The latter are showing some tendency to increased activity and have secured Dr. W. R. Hadwen of Gloucester to conduct a lecturing campaign in the various wards of the city.

Glasgow University.

The city authorities are taking much interest in the academic events which are to mark the celebration in June next of the ninth jubilee of the University. At a recent meeting of the magistrates it was decided that a banquet should be given by the corporation to the various distinguished guests who will be present in the city in response to the invitation of the University Court and Senatus.—The examinations for degrees in medicine commence this week. For the first professional the entrants number 147; for the second professional, 137; and for the third professional, 74. These numbers include no less than 39 women candidates.

Microscopical Society of Glasgow.

The last meeting of this society was occupied by a lecture on "The Economic Importance of Bacteria," by Dr. R. M. Buchanan, bacteriologist to the city health department. The application of bacteria to various industries was shown by instances of their ferment-forming capacity, as in the manufacture of alcohol and the preparation of cheese. In agriculture the value of bacteria was illustrated by a description of the power which certain varieties possessed of fixing the free nitrogen of the air and presenting it to plants in a form suitable for their assimilative powers. The lecturer strongly insisted on the economic and national importance of the introduction into various agricultural processes of scientific knowledge and method. The lecture was well illustrated by numerous lantern slides, microscopic preparations, and culture tubes, and Dr. Buchanan was cordially thanked by the society.

April 2nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Proposed Bacteriological Institute in Dublin.

THE movement in favour of the establishment of a bacteriological institute in Dublin continues to make progress. A conference is about to be held of delegates from many public bodies, colleges, and institutions. At the quarterly meeting of the Dublin Corporation, which took place on April 1st, Sir Thomas Pile moved the adoption of a report of the Public Health Committee recommending the establishment in Dublin of a bacteriological institute. The committee were of opinion that such an institute was much required, and they thought that it should be a national one supported by all the public institutions and sanitary authorities in the country. They understood that it was proposed to establish in Dublin a pathological institute in connexion with all the lunatic asylums of Ireland. As the work of such an institute would be mainly bacteriological the committee thought that one institute would suffice, and the corporation, as the principal supporters of the largest lunatic asylum in Dublin, must naturally feel interested in all matters pertaining to the pathology of the insane. The committee suggested that the council should express approbation of the proposal to establish a bacteriological institute and should undertake to afford some pecuniary help in establishing and maintaining it. The motion was passed unanimously.

Death of Dr. Arthur K. F. McCutcheon.

Dr. Arthur K. F. McCutcheon died at his residence, 3, Rutland-square, Dublin, on March 27th. He was a graduate in medicine of the University of Dublin, and was elected a Fellow of the Royal College of Physicians of Ireland in 1895. He held the position of physician to the Whitworth Hospital, Drumcondra. His funeral, which took place on March 30th, was attended by the President and Council of the Royal College of Physicians of Ireland. A large and representative gathering of the members of the medical profession was present. The untimely death of Dr. McCutcheon at the comparatively early age of 43 years has caused much grief among his friends.

Richmond, Whitworth, and Hardwicke Hospitals, Dublin.

Mr. Robert D. Joyce has been appointed ophthalmic surgeon to the House of Industry Hospitals, in the room of Dr. Archibald H. Jacob, deceased.

The British Association.

At a meeting held in Belfast on March 29th, the Lord Mayor presiding, a local general committee was appointed to make provision for the reception of the British Association in 1902, in accordance with an invitation accepted from Belfast for that year. A treasurer and three secretaries were also elected.

Belfast Ophthalmic Institution.

At the annual meeting of the friends of this excellent institution, held in Belfast on March 29th, it was reported that 1267 eye cases, 298 ear cases, and 259 throat and nose cases were treated as extern patients. There were also 104 intern patients. Alterations are about to be made which will improve the extern rooms and will provide a new operating theatre. Dr. Victor Fielden has been appointed anæsthetist to the hospital. The High Sheriff of Belfast, who presided, warmly congratulated the senior surgeon (Dr. Walton Browne) on his recovery after his late illness.

Irish University Education.

A series of important resolutions on this question have just been passed by the Ulster Liberal Unionist Association. They approve of the appointment of the Royal Commission to inquire into the circumstances of higher education in Ireland. They urge that the Commission should be composed of men of universally acknowledged eminence in educational and public affairs and who are superior to sectarian and political partisanship. If this is not done the conclusions of the Commission will fail to command respect in any quarter and will simply result in intensifying the existing confusion in Irish university conditions. They also recommend that in the interests of commercial, agricultural, and manufacturing industry in Ireland, commercial education should be included as a branch of university work, and that a suitable connexion should be formed between the organised courses of agricultural and technical colleges and the university curriculum in such a manner that work of a scientific character done by students at such colleges might become an avenue to a university degree. They suggest that the proposed Royal Commission should be instructed to take evidence and to report upon the relations existing between the universities and commercial, agricultural, and technical education in Great Britain and in foreign countries, and to recommend in what way such education may be effectively brought within the sphere of university influence in Ireland.

Food Unfit for Human Consumption: Interesting Action at Cork Assizes.

Mrs. Blessing Wallis, widow of a solicitor, brought an action before the Lord Chief Justice at the Cork Spring Assizes against Mr. Thomas Russell, fish merchant, for breach of warranty of certain goods—namely, two crabs—and for supplying goods unfit for human food, whereby the plaintiff became dangerously ill. Damages were laid at £1000.

There was a formidable array of counsel for both sides and the case excited very considerable interest. According to the evidence Mrs. Wallis sent her grand-daughter, a Miss Donovan, to Mr. Russell's establishment for two crabs, and one of Mr. Russell's assistants in the course of the sale described the crabs as being sound and good in reply to a question by Miss Donovan. The crabs had been already boiled on Mr. Russell's premises. Miss Donovan took them home and without further dressing she and her grandmother partook of some of the claws at tea. On opening the shells of the bodies of the crabs they were found to contain a brownish fluid. On being removed downstairs the servant ate portions of the claws, but on noticing the contents of the shells threw what remained of the crabs into the ash-pit. After a few hours had elapsed Mrs. Wallis, Miss Donovan, and the servant became very ill and the symptoms of the illness were very similar. Mrs. Wallis suffered from diarrhœa, vomiting, and collapse and was for some time unconscious. Another grand-daughter of Mrs. Wallis hearing of her grandmother's illness arrived on the following morning and on going out to the yard where the remnants of the crabs lay she noticed a distinctly bad odour when some yards away from the crabs. The medical evidence showed that the three patients had been suffering from irritant poisoning. For the defence the man who had sold the crabs to Mr. Russell gave evidence and Mr. Russell was also examined. He deposed that he exercised every care in the selection of the crabs and that he had made inquiries with regard to several others of his customers who had purchased crabs out of the same consignment and that none of them had suffered. The hearing lasted for part of two days and it resulted in a verdict for the plaintiff, the damages being laid at £150. It is stated that an appeal will be lodged by the defendant.

April 2nd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Respiratory Chemistry of Phthisis.

AT the meeting of the Academy of Medicine held on March 19th M. Robin communicated the results of some researches which he had made upon 392 patients with regard to constitutional conditions (*terrain*) predisposing to phthisis. One well-known characteristic of phthisical patients is a loss of organic mineral matters. But there is another which is quite opposed to the ordinarily expressed ideas. It is generally thought that both respiratory changes and hæmatopoiesis are much diminished in phthisis. On the contrary, respiratory exchange is much increased in this disease, and of 162 cases examined this peculiarity was found in all but eight. The respiratory chemistry of phthisis is something quite peculiar. A healthy man consumes per kilogramme of body-weight per minute 107 cubic centimetres of air. For phthisical patients the figures are as follows: men, 192 cubic centimetres and women 225 cubic centimetres. A normal man consumes 5·13 cubic centimetres of oxygen, a phthisical man 8·72 cubic centimetres, and a phthisical woman 10·29 cubic centimetres. A healthy man expires 4·17 of carbon dioxide per kilogramme per minute, a phthisical man expires 8·85 cubic centimetres, and a phthisical woman 7·5 cubic centimetres. A healthy man absorbs 0·85 cubic centimetre of oxygen per kilogramme per minute, a phthisical man 1·87 cubic centimetres, and a phthisical woman 2·5 cubic centimetres. This exaggeration of respiratory exchange exists in a less degree in fibrous tuberculosis. It has been observed in the very earliest stages of the disease long before any auscultatory signs are perceptible. It exists also in the latest stages. It can be definitely stated therefore that in 92 per cent. of phthisical patients the respiratory exchanges are much increased in every stage of the malady. These results hold good in cases of tuberculosis of the bones, but they are not found in tuberculous peritonitis or meningitis or in lupus. In 40 cases of various morbid types the conditions noted differed. In typhoid fever exchange was lessened. In influenza it was slightly increased. Shortly, although in some diseases the respiratory exchange was slightly increased, in no one was the increase comparable with that existing in phthisis. Therefore, in doubtful cases the study of the respiratory chemistry will enable the physician to make a diagnosis at a very early date and in various cases M. Robin and M. Binet have been able to diagnose a tuberculous predisposition (*terrain*). In sundry cases when they noted exaggerated respiratory exchange the patients were attacked by tuberculosis and died. On the contrary, a patient in whom numerous bacilli were found, but whose respiratory exchange was unaltered, recovered. This method of examination may serve to separate patients with a tuberculous history into those who are predisposed to the disease and those who are free from all taint. Finally, it may be considered that examination of the respiratory exchange offers a method of the very first rank for making an early diagnosis in cases of tuberculosis.

Helminthiasis in China.

At a meeting of the Academy of Medicine held on March 25th M. Laveran read some notes by Dr. Matignon on helminthiasis in China and its apparent influence in the production of appendicitis. Dr. Matignon remarked on the extreme frequency of intestinal worms in China. Among adult Chinese they were found to exist in 75 out of 100 cases examined, and in Chinese children they were found in 98 out of 100 cases. Among adult Europeans they were found in 25 per cent. of the cases examined. Despite these figures Dr. Matignon during a period of four and a half years saw only one case of appendicitis in a Chinese and not more among 150 Europeans who came under his care. In one young girl and two missionaries he noticed signs resembling those of appendicular colic which were, however, due to tænia. In Northern China appendicitis is completely unknown. The populace is almost completely vegetarian. In Peking and its suburbs the Chinese eat only a small quantity of meat, and that of duck, chicken, mutton, or pork. Their chief articles of food consist of millet, rice, maize, potatoes, and turnips. They also eat unleavened cakes of maize or wheaten flour, cooked by steam. It is very likely due to this *régime* that appendicitis is so rare in China and it may also be the cause why the digestive functions among the Chinese are so regularly performed. Constipation among them is extremely rare.

April 2nd.

Obituary.

JOSEPH FODOR, M.D.,

OF BUDAPEST.

WE sympathise with our Hungarian brethren on the occasion of the great loss they have sustained by the death of Dr. Joseph Fodor, Professor of Hygiene at the University of Budapest. The members and delegates who took part in the Eighth International Congress of Hygiene and Demography will remember the courteous manner in which Professor Fodor received them as President of the Organising Committee, and to him was due in no small degree the undoubted success of the Congress at Budapest.

Joseph Fodor was born in 1843 of noble parents at Lakocsa, in the county of Somogy in Hungary. He studied medicine at Budapest and Vienna and in 1865 graduated as Doctor of Medicine. The next year he filled the post of assistant to Dr. Rupp, Professor of Medical Jurisprudence, and on the recommendation of the late Dr. Markusovszky obtained in 1870 a travelling scholarship from his Government, to become a pupil of Dr. Pettenkofer at Munich and later of Baron Liebig. He worked in the laboratories of Recklinghausen and Flalger in Würzburg and then visited other parts of Germany, Holland, Belgium, and England. In 1870 he returned home and was appointed to the chair of Medical Jurisprudence in the University of Kolosvár in Transylvania; four years later he become professor of hygiene at Budapest. For 28 years he devoted his energies to studies in connexion with sanitation. His work on "Hygienic Investigation of Air, Soil, and Water" was awarded the prize of 200 ducats by the Academy of Sciences of Hungary and was translated into German. He introduced Pettenkofer's principles of hygiene in Hungary and created a school and literature in his country on sound principles of sanitation, the effects of which are now generally felt through the successful efforts of numerous pupils; one of the most distinguished among them was the late Dr. Eugen Farkas, well known to many in England. Thanks to the coöperation of the late Dr. Markusovszky and the patronage of the Minister of State, M. Trefort, sanitation is now placed on a sound basis in Hungary. Whilst joint editor of the medical

journal, *Orvosi Hetilap*, Dr. Fodor successfully propounded a scheme that not medical students only, but other undergraduates of the University—namely, law students, engineers, and chemists—should attend a course on the principles of general sanitation. To popularise his scheme he helped to establish a "Society of Sanitation," first mooted by Dr. Markusovszky, and through its organ, *Egészség* (Health), rendered most useful service to the public at large.

Professor Fodor also did good work as member of the Academy of Sciences, holding the position of president of the natural history section and acting as editor of its journal. We find him throughout his life a conscientious labourer in the domain of science: his colleagues knew his worth and accorded to him their appreciation. At the university he attained the highest positions, first as dean of the faculty and finally as rector magnificus. Honours at home and from abroad were heaped upon him; he was nominated ministerial councillor and was decorated by the Sovereign with the Order of the Iron Crown, and he received—and of all his academical distinctions this was the one which he valued most—the LL.D. of the University of Cambridge. In private life Dr. Fodor possessed qualities which endeared him to others—modesty, unselfishness, devotion to friends, and readiness to oblige all who came in contact with him. The tenour of his life, though generally happy, was disturbed by domestic sorrow; he lost his wife after much and prolonged suffering, and also his daughter Madame Gerlóczy; while other private troubles also told considerably upon a not over-strong and highly sensitive constitution.

At the beginning of the present year Professor Fodor suffered from a severe attack of influenza. In due course he was able to go about, but strength was slow in returning. In the first days of March he was again confined to his bed, during which time he had the misfortune to sustain an injury to the left leg which necessitated the removal of the limb at the upper third of the thigh. The stump healed well, but he did not recover entirely from the double shock of injury and amputation. On March 19th death put an end to his sufferings at the comparatively early age of 58 years. He was accorded a public funeral, starting from the palace of the Institute of Public Hygiene; the presence of Ministers of the Crown, of members of the aristocracy and of both Houses of Parliament, of deputations from various public bodies, and of a large concourse of mourners generally, testified to the universal esteem in which the deceased was held. Many friends and patients will feel his loss, but none more than his devoted pupils, who, 100 in number, bearing torches, ranged themselves round the coffin of their beloved master on the journey to his last resting-place.

WILLIAM RICHARD ROGERS, M.D. HEIDL., M.R.C.P. LOND.

DR. WILLIAM RICHARD ROGERS, who recently died at his residence, 26 Upper Baker-street, N.W., was born in 1817 and received his education at University College, London. In early life he travelled a good deal on the continent, for two years "walking the hospitals" in France and Italy, and also visited Tunis. He subsequently came to London and practised for many years in Berners-street. He graduated M.D. and D.S. of the University of Heidelberg in 1838 and became a Member of the Royal College of Physicians of London in 1859. He served as physician to the Samaritan Free Hospital for 24 years, being made consulting physician in 1882 and vice-president in 1899. He was for a time consulting surgeon to the Grosvenor Hospital for Women and Children, Vincent-square, Westminster, S.W., and senior physician to the Farringdon General Dispensary. He was the author of several papers on Inflammation and Obstruction of the Cæcum, Inversion of the Uterus, and Ruptured Perineum. Late in life he met some misfortunes, especially through the failure of an insurance office, and his health broke down so that he was obliged to give up practice. He was married to a very talented lady, an artist of some distinction, by whom he had several daughters and two sons, the elder of whom is surgeon in His Majesty's navy. Dr. Rogers was of a rather retiring disposition, but much beloved by his patients and fellow-practitioners—a man without an enemy.

Medical News.

VICTORIA UNIVERSITY.—A degree ceremony was held at the Owens College on March 29th when the following candidates were presented. The candidates from Owens College were presented by Professor Young and those from University and Yorkshire Colleges by Professor Chadwick. The degrees were conferred by the Vice-Chancellor (Principal A. Hopkinson of Owens College). Professor Sinclair, Professor Wild, and Mr. Edward Fiddes were also present.

BACHELOR OF MEDICINE AND OF SURGERY.

John Thomas Bailey, Owens; James William Henry Brown, Yorkshire; Charles William Budden and John Scott Byrne, University; Andrew Campbell Clarke, Charles Hollows Dawson, Theodore Llewellyn Fennell, and Robert Francis Ferris, Owens; Robert Thomas Forster, Yorkshire; James Percy Good, Reginald Gordon, Frederick George Hack, Herbert Shaw Lister, and James Mcllraith, Owens; Arthur Francis Martin, Yorkshire; Albert Ramsbottom, Claude William Scott Saberton, Harry Slater, and Thomas Tierney, Owens; Roger Durant Willcocks, University; and Henry Merrill Williamson, Owens.

In the Faculty of Medicine the following candidates have passed in the subjects indicated:—

FINAL EXAMINATION.

Part I.—D. M. Alexander and H. M. Berry, University; J. R. Bolton, Yorkshire; G. G. Buckley, Owens; R. N. Butterworth and W. H. Canter, Yorkshire; R. B. Fletcher, Owens; J. A. C. Forsyth, Yorkshire; D. G. Gellatly and W. S. Holmes, Owens; J. A. Johnson, C. O. Jones, and R. J. Jones, University; W. G. Kinton, Owens; W. L. Maccormac, Sydney Platts, and A. H. Radcliffe, Yorkshire; E. R. Roberts, University; Frank Sugden, Yorkshire; and S. W. Swindells, Owens.

SECOND EXAMINATION.

A. Anatomy and Physiology.—John Battersby, A. N. Benson, and Alexander Boothroyd, Owens; Alan Boyle and W. E. Brierley, Yorkshire; Howard Buck and Laurence Clay, Owens; Richard Coates, Yorkshire; Thomas Coogan, Owens; Edward Cundall and A. M. Deane, Yorkshire; Douglas Elder, University; J. L. Falconer, Owens; Ernest Gibson, University; Tom Glover, J. W. Hartley, and H. D. Haworth, Owens; S. L. Heald, Yorkshire; J. P. Henderson, Arthur Hendry, and W. E. Hewitt, University; Hubert Hodge, Owens; C. A. Hughes, A. D. Hunt, and H. R. Hurter, University; Hamilton Irving and J. M. H. Jones, Owens; G. H. Joseph, George Laurence, and J. T. Lloyd, University; T. W. Lonsdale, Owens; H. J. Macvean, Yorkshire; J. de V. Mather and H. J. Moon, Owens; D. J. Mulholland, University; G. G. Parkin, F. G. Pell-Ilderton, R. N. Porter, W. B. Ramsden, and Frank Robinson, Owens; F. H. Salisbury, University; J. L. Schilling and W. G. Scott, Yorkshire; Harold Simms, R. T. Stinger, J. C. Smyth, and R. H. Swindells, Owens; A. B. Sykes, University; F. P. S. Thomas, Owens; H. G. Thompson, University; Leonard Thorp, Owens; M. G. L. Walker, Yorkshire; and Douglas Wardleworth, S. H. West, and E. M. Wilkins, Owens.

B. Materia Medica and Pharmacy.—Alexander Anderson, Yorkshire; Neville Bradley, University; C. H. Bromhall, J. G. da Cunha, and J. A. Davies, Owens; E. S. H. Gill, University; H. B. Holmes, Owens; Lancelot Hutchinson, University; Walter Longley, Yorkshire; Hugh McManus and D. J. Mulholland, University; C. S. O'Neill, Owens; E. W. Reed, Yorkshire; S. H. Ryan and W. F. Shaw, Owens; I. C. Thorburn, University; and W. F. J. Whitley, Yorkshire.

The University Scholarship was gained by H. D. Haworth (Owens); *proxime accessit*, Alan Boyle (Yorkshire).

THE PREVENTION OF TUBERCULOSIS.—A public meeting was held at Devizes on March 27th, under the presidency of the rector (Rev. J. Watson), in support of the scheme for erecting a sanatorium for consumptives at Winsley, near Bradford-on-Avon. Addresses were delivered by Dr. P. Watson Williams, Dr. L. A. Weatherly, Mr. G. S. A. Waylen, and others, and it was decided to form a local committee consisting of Mr. E. Colston, M.P., the Mayor, the members of the medical profession in Devizes, and others, to take steps for raising the necessary funds.

OVERHEAD DANGERS IN MANCHESTER.—Manchester is exercised in mind on the subject of overhead wires, and a meeting of the special joint committee appointed by the Telephones, Paving, and Tramways Committees of the corporation was held on March 15th to consider the question. It appears that there are 7798 wires over existing lines of tramways and 3781 crossing intended routes of tramways. There are 60 miles of telephone pipes under the streets. They are in cables running from the telephone exchange to buildings in each local area in which subscribers are situate. Each cable is opened out on the top of a building in a local area into short overhead wires connected to the nearest chimneys or corners of buildings in which there are subscribers. The overhead cables are insulated and contain about 104 wires each. The postal telegraph wires are apparently not insulated, as in the city surveyor's report it is said that

the danger from these when crossing over tramway routes "would be reduced by enclosing them in insulated cables." The result of the discussion was that the town clerk was directed to prepare a report showing the legal status of the corporation as regards overhead wires. The sword of Damocles was nothing compared to our modern improvements on that weapon, as witness the Liverpool tragedy.

FEES OF PUBLIC VACCINATORS.—At the meeting of the Chippenham Board of Guardians held on March 18th a letter was received from Mr. J. P. Martin of Box, declining the appointment of public vaccinator for that parish at the fee of 5s. per case. The guardians decided to ask Mr. Martin what remuneration he would consider to be reasonable.

WESTERN COUNTIES VETERINARY ASSOCIATION.—The annual meeting of this association was held at Exeter on March 28th under the presidency of Mr. T. G. Bond. Mr. John Dunstan read an interesting paper on Bacteriology in its relation to Veterinary Science and a discussion followed. Mr. R. Penhale was elected president for the ensuing year.

SUPERANNUATION ALLOWANCE.—Mr. B. Simmons, formerly medical officer of the Wotton-under-Edge (Gloucestershire) district of the Dursley Union, has been granted a superannuation allowance of £56 per annum.

VACCINATION FEES.—At the last meeting of the Liskeard Board of Guardians it was reported that the vaccination fees amounted to £42 in 1899 and to £183 in 1900.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Nursing in Irish Poor-law Institutions.

WHEN the House of Lords meets after the Easter Vacation, Lord Montesgle of Brandon will raise the question of nursing in workhouse infirmaries and fever hospitals in Ireland and will move for a return on the subject.

Hours of Labour in Shops.

The Committee of the House of Lords on the hours of labour in shops are accumulating a large body of evidence in favour of earlier closing and Lord Avebury's Bill. Witness after witness has stated that no more is to be hoped for from voluntary effort and that legislation is absolutely essential in existing circumstances. At a recent meeting of the Committee a letter was read from Professor J. G. McKendrick of Glasgow in which he said that he has no doubt whatever that the present long hours and confinement of shop assistants are injurious to health, and also one from Dr. D. Yellowlees of the same city saying that he was quite sure that the unreasonably long hours and close confinement of shop assistants are a great evil and are often not only a great hardship but very injurious physically, mentally, and morally.

HOUSE OF COMMONS.

THURSDAY, MARCH 28TH.

The London Water Question.

Dr. MACNAMARA asked the President of the Local Government Board whether he would place the text of his proposals respecting London water before the House before the close of the present session so that they might be duly considered by the people of London and the extra municipal areas affected during the Parliamentary recess.—Mr. LONG: No, sir; I am unable to assent to the suggestion.

Factory and Workshop Legislation.

At this sitting Mr. RITCHIE introduced two Bills, one to amend and the other to consolidate the Factory and Workshops Acts. In explaining the former he said on the subject of regulations for dangerous trades that under the present law there might be many arbitrations with respect to the orders of the Secretary of State. That was proposed to be abolished by the Bill of his predecessor (Sir Matthew White Ridley) last session, who proposed that the regulations should be referred to a referee, who should give his decision, which would be binding upon the Secretary of State in the sense that he must either comply with the decision or abandon the regulations altogether and substitute new ones. For his (Mr. Ritchie's) part he thought that there were strong objections to this principle of arbitration. He did not think it was right that the responsibility should be taken off the shoulders of the Secretary of State and put upon those of an irresponsible outsider. He proposed, therefore, that the Secretary of State should be responsible for making the rules relating to dangerous trades, subject to two conditions—first, that he should be bound to make the fullest inquiries and to receive evidence in public; and, secondly, that the rules should lie on the table of both Houses of Parliament for six weeks before they took effect. There was another important modification. The present state of the law relating to laundries was unsatisfactory and confused. He proposed to apply to laundries the provisions of the Factory Acts, preserving the existing distribution of hours. There was another important alteration with regard to laundries. Last year's Bill excepted the inmates of any institution conducted in good faith for charitable purposes. This exception, in his view, was indefensible. These laundries ought not to be worked upon conditions other than those imposed upon ordinary laundries, with which they, in many cases, competed. If they were not so worked they had nothing to fear from the application of the Act to them, and, accordingly, he proposed to bring them within the Act. He proposed to insert special provisions to meet the objections which had been expressed to the inclusion of religious institutions.—Both Bills were read a first time.

FRIDAY, MARCH 29TH.

Plague at Cape Town.

Sir WALTER FOSTER asked the Secretary of State for War whether, in view of the increase of plague at Cape Town and the danger of importing the disease into this country, he would direct that all military invalids and soldiers arriving at English ports in ships on which any case of plague had occurred should be isolated and kept under observation for a sufficient period before being allowed to go to their homes or to military camps.—Mr. BRODRICK replied that instructions to this effect were issued on March 22nd to all concerned.

MONDAY, APRIL 1ST.

Army Medical Officers and the Age of Recruits.

Mr. PIRIE asked the Secretary of State for War, with reference to ascertaining the correct ages of recruits and the evils of the existing system, if he would state in what respect the oath of allegiance taken by the recruit on attestation was an oath as to correctness of his age, and if he would consider the advisability of altering the oath so as to make it refer more directly to this point and at the same time to include among punishable offences any false statement of age on his part; if he could state why more care was not exercised by the army medical officers in their duty in this respect, and whether in future neglect as to this on their part would be dealt with more severely; and who was the medical officer responsible for the enlisting as a full-grown private soldier of George H. Over, who was only 14 years old, and whether the officer had been reprimanded.—Lord STANLEY replied: The oath of allegiance has nothing whatever to do with the matter. On attestation the soldier signs his name to a declaration that his answers to various questions are true, amongst which is a question as to age. I am advised that a conviction for making a false statement as to age cannot be obtained. There is no reason to suppose that medical officers are careless on the point of age and in this particular case the officer does not appear to have been to blame as the recruit was well grown.

Standards for Milk and Cream.

Mr. STRACHEY asked the First Lord of the Treasury whether he could say what opportunity there would be for the House to consider the report and recommendations of the Departmental Committee of the Board of Agriculture in reference to fixing standards for milk, cream, and separated milk before they were adopted.—Mr. BALFOUR replied: I understand that the departmental committee to which the hon. member refers reported about a fortnight ago and that my right hon. friend at the head of the Board of Agriculture (Mr. Hanbury) intends to give a reasonable time for representations to be made by those interested as to the mode in which the report should be dealt with. I do not think that a specific opportunity could or should be given to the House for dealing with a matter within the discretion of the department and vested in it by statute.

Isolation Hospitals Bill.

This Bill to improve the position of county councils with regard to the provision of isolation hospitals was read a second time and referred to the Standing Committee on Law. Mr. C. HOBHOUSE took exception to some of the clauses and Mr. WALTER LONG, President of the Local Government Board, explained to him that the Bill had been framed by the County Councils Association and all that had been done by his department was to make certain slight alterations which had received the approval of the association. The sole object of the Bill, Mr. Long added, was to enable county councils to do work in the direction of providing isolation hospitals which they could not do in the existing state of the law.—Sir WALTER FOSTER expressed his approval of the measure.

Cremation Bill.

Sir WALTER FOSTER moved the second reading of the Cremation Bill, a measure which has already passed through all its stages in the House of Lords. He explained that it was permissive in its character and gave power to local authorities to erect crematoria for the use of the locality, subject to the approval of the Local Government Board, and under regulations which had been sanctioned by the Home Office.—Mr. RITCHIE said that the Home Office raised no objection to the general principle of the Bill. No doubt at one time cremation was regarded with some suspicion, but public opinion on the subject had considerably advanced of late years. When the Bill reached the Committee stage it would be their business to see that proper safeguards were introduced, and with that reservation he offered no opposition to the measure.

The Bill was read a second time and referred to the Standing Committee on Law.

ROYAL COMMISSION ON ARSENICAL POISONING.

TUESDAY, MARCH 26TH.

THE Commission held another meeting to-day in the Town Hall of Manchester, the members present being Sir WILLIAM S. CHURCH (who presided), Professor THORPE, and Dr. B. A. WHITELEGGE.

Dr. J. DIXON MANN, Professor of Forensic Medicine in Owens College, gave evidence as to cases of arsenical poisoning that had come under his observation in hospital and private practice. He explained that he had examined the hair of patients, especially women, and found in it arsenic in amounts varying from half a gramme to two grammes. In one or two cases he found arsenic in the hair and

nails without any other symptoms of arsenical poisoning. In many cases he found peripheral neuritis without marked pigmentation, and, indeed, without any pigmentation. He had examined the brain of a patient who had died from peripheral neuritis, and found in it traces of arsenic, chiefly in the white substance. It was difficult to distinguish between the effects of arsenic and alcohol. He had been latterly disposed to think that it was possible that there had been small quantities of arsenic in beer, which would account for the widespread neuritis which had been fairly common in hospital practice prior to this epidemic. He had, however, known cases of neuritis in which the patients had taken spirits exclusively. His recent investigations had led to the conclusion that arsenic remained much longer in the tissues than he had before thought possible. In one case a woman was in the hospital for 82 days and yet had arsenic present in the tissues. The fact that women had suffered so much more than men was probably due to the want of activity in women. It was a question of elimination and many of these women were chronic alcoholics who did not move about much and whose tissues were not, so to speak, in activity. From the amount of arsenic he had found in cases he would say that there was more arsenic in the beer than had been accounted for by analysis. To make an absolutely exact analysis of beer was a very laborious process and on the whole he thought the amount of arsenic had been under- rather than over-estimated. He could not accept the statement that one-twentieth of a grain of arsenic in a gallon of beer would be innocuous.

Mr. W. R. DEAKIN, of the Manchester Brewing Company, Limited, was the next witness and his evidence had regard mainly to the use of Bostock's sugars and the means taken by brewers to free their plant from traces of arsenic.

Mr. C. ESTCOURT, analyst to the corporation of Manchester, submitted the results of analyses of beer. He advocated a uniform method of analysis and a standard test for beer, giving as a reason the discrepancies which had appeared in connexion with the present inquiry. He stated that three public analysts examined portions of the same beer and one obtained one twelfth, another one-tenth, and the third one-twenty-fifth of a grain of arsenic per gallon of beer. There were many difficulties under the Public Health Acts in dealing with food accidentally contaminated with poison on a large scale, but at the same time he considered that these Acts were the only effectual means of putting a stop at once to wholesale poisoning. Action taken under the Sale of Food and Drugs Acts meant prosecutions which could not take place in less than a fortnight after the offence, and which were in most cases postponed for several weeks.

Mr. E. SERGEANT, medical officer of health to the Lancashire County Council, said in the course of examination that between Nov. 27th and Feb. 28th the officials secured the destruction of arseniated beer contained in 5313½ 36-gallon barrels, 22,680 pint bottles, and 12,395 half-pint bottles. Besides this a large quantity was destroyed privately by brewers. It was satisfactory to state that since Jan. 14th no case of contamination had come under his notice sufficiently serious to give rise to legal action, though from that date to the end of February 101 samples had been taken. His view of the matter was that it would be unsafe to allow the consumption of beer containing an amount of arsenic capable of estimation by an analyst. If the presence of arsenic was due to avoidable impurity he saw no reason why absolute purity should not be required. This position was already admitted by numerous brewers who did not hesitate freely to advertise the purity of their beers. Communications received from medical officers of health showed that in 36 of the total 138 districts within the administrative county cases of arsenical poisoning had been observed, and information was given of 863 cases and 12 deaths, including two certified by the coroner after inquest. These figures did not, in his opinion, represent the total number of cases of poisoning in the county.

Mr. FRANK SCUDDER, chief assistant to Sir Henry Roscoe, gave the Commission analytical results.

The Commission then adjourned.

FRIDAY, MARCH 29TH.

The Commission met again to-day in the Town Hall, Manchester, the members present being Lord KELVIN (chairman), Sir WILLIAM S. CHURCH, Mr. COSMO BONSOR, and Dr. WHITELEGGE.

Dr. JUDSON S. BURY, physician at the Manchester Royal Infirmary, in the course of examination, said that he had made a special study of neuritis and no doubt some of the cases of peripheral neuritis he had formerly seen might have been due to arsenical poisoning. Possibly a large proportion of the cases of neuritis of recent date were due to arsenic but certainly not all of them. The evidence pointed in the direction of alcohol itself being an essential cause of the neuritis cases with which he was familiar prior to this outbreak.

Mr. J. CARTER BELL, public analyst to the county of Chester and the boroughs of Salford, Birkenhead, Stalybridge, and other boroughs, gave evidence as to the results of the analyses and the steps taken to stop the sale of implicated beer. He explained that he did not stop the sale where he found only one-hundredth part of a grain of arsenic per gallon, but where he found one-tenth of a grain or over he wrote to the inspector under the Sale of Food and Drugs Act to stop the sale of the beer. Like other analysts, Mr. Carter Bell expressed the opinion that there should be a uniform method of testing beer for arsenic.

Mr. HERBERT MORRIS, manufacturing chemist, West Gorton, said that he made sulphuric acid from brimstone, but probably not more than 5 per cent. of pure sulphuric acid made in this country was made from brimstone. The reason for this small percentage was that the quantity of arsenic and iron contained in sulphuric acid made from pyrites and oxide had not hitherto been considered harmful or deleterious. The acid could be purified and the process was not expensive but required to be conducted with great care and supervision. He manufactured the acid from brimstone because it was the only safe method of making acid to be used for foodstuffs, acid made from pyrites always containing the elements of danger.

Professor S. DELÉPINE of Owens College was the next witness and in the course of his examination he said that he had found arsenic sufficiently abundant to make its detection easy in less than half a tumbler of beer. Nothing but an artificial product used in large quantity could account for such a contamination. Brewing-sugars were the only artificial products used in large quantity and he therefore concluded that they had most probably been the means of introducing the arsenic into the beer and this was found to be the case on testing the sugars. He found the sulphuric acid which was tested not only to contain a large amount of arsenic, but actually to be saturated with the poison. A very small amount of arsenic was found to be present in most of the other brewing materials and it was therefore evident that the arsenical glucose was the chief cause of the outbreak of disease under investigation.

Mr. HENRY WELD-BLUNDELL, chairman of the Cornbrook Brewery Company, and Mr. G. E. COWELL, managing director of Wilson's Brewery, Newton Heath, also gave evidence, and thereafter the Commission adjourned.

SATURDAY, MARCH 30TH.

The Commission held another meeting to-day in the Town Hall, Manchester, with Lord KELVIN in the chair.

Mr. SIGMUND STEIN, consulting chemist, Liverpool, gave the opinion that sulphuric acid should always be a purified acid from whatever source it came and said that it was necessary that there should be proper chemical control in every sugar refinery. Everything should be examined so as to preclude impurity and from time to time samples should be sent to a public analyst as a check upon the work of the factory chemist. Very often phosphoric acid was used in sugar factories for clearing the juice and he had frequently found it to contain arsenic. By the use of such acid the arsenic could pass into the sugar. Phosphoric acid was also used in the preparation of golden syrup and in several of the beet-sugar factories. Five or six years ago he tested samples of phosphoric acid for arsenic and found traces of it in two of them. Speaking from long experience of the manufacture of glucose he said that the presence of arsenic in it was the exception and not the rule, and he insisted that if a penalty were imposed by law in all cases where arsenic was found in glucose manufacturers would see that it was not present.

Mr. H. SPENCER, of the Inland Revenue Department, in the course of examination said that priming was supposed to add to the brisk-ness of the beer and increase its refreshing qualities. The officers of the department, like everybody else, were very much astonished when they learned that arsenic was being found in beer. If they knew that a brewer was adding something objectionable to his beer it would be the duty of the officers of the department to take cognisance of the fact, report the matter, and await instructions. The brewers had sought to get a return of the duty paid on the tainted beer, and while some cases were pending, others had been settled. The officers of the department had no knowledge whatever of the beer in the cellars of publicans, but the whole of the beer which was supposed to be contaminated and which the brewers presented to the officers of the department to take an account of was destroyed under the supervision of these officers. Revenue officers were not employed to act as officers of health, but simply for financial purposes and to prevent noxious materials getting into beer whilst the beer was in the brewery.

The Commission then adjourned.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ALLINSON, H. C., M.R.C.S., has been appointed Medical Officer of Health, Borough of King's Lynn.

ANDREWS, W. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been re-appointed District Medical Officer by the Kingsbridge (Devon) Board of Guardians.

BERGMAN, L. H. (in practice before 1878), has been appointed Dentist at the Workhouse Incorporation, Kingston-upon-Hull.

BEVILLE, F. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer, the Workhouse, Uxbridge Union, vice L. J. Minter, resigned.

BROADBENT, F., L.R.C.P. Edin., M.R.C.S., has been appointed District Medical Officer, Lincoln Union.

BURGESS, ARTHUR H., M.B., Ch.B., M.Sc., F.R.C.S. Eng., has been appointed Visiting Surgeon to the Manchester Union Hospital, Crumpsall.

CHARPENTIER, A. E. L., M.B. Durh., has been appointed Medical Officer of Health, Uxbridge Rural District, vice C. Roberts, deceased.

COOKE, M. A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 1 District of the Stroud Union.

COTTON, WILLIAM, M.A., M.D., C.M. Edin., D.P.H. Cantab., has been appointed Surgeon to H.M. Prison, Horfield, Bristol.

CROSS, R. G., L.R.C.P. Lond., M.R.C.S., D.P.H., has been appointed District and Workhouse Medical Officer, Petersfield Union, vice C. S. Ticehurst, resigned.

DISMOOR, H. B., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer to the Workhouse, and Assistant Medical Superintendent to the Infirmary, Lewisham Union.

EADON, W. F. BAILEY, L.R.C.P., L.R.C.S., L.M. Edin., has been re-appointed Medical Officer for the Second District of the Chipping Sodbury (Gloucestershire) Union.

FORREST, J. G. S., L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer to the Corporation of Bury St. Edmunds, vice A. H. Gibbon, resigned.

GIMSON, K. C., M.B., B.C. Camb., has been appointed Medical Officer to the Bridge School at Witham, Metropolitan Asylum District.

GLEGG, WILFRID, M.D., M.R.C.P. Edin., has been appointed Senior Resident Medical Officer to the Throat Hospital, Golden-square, London, W.

GRIFFITHS, A. D., M.D. Brux., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Cottage Homes, Isle of Thanet Union.

GRÜNBAUM, O. F. F., M.A., B.C. Cantab., D.Sc. Lond., has been appointed Clinical Pathologist at King's College Hospital, London.

HARRIS, JOHN HENRY, M.R.C.S., L.S.A., D.P.H. Camb., has been re-appointed District Medical Officer by the Kingsbridge (Devon) Board of Guardians.

HILL, PHILIP EDWARD, M.R.C.S., L.S.A. Lond., has been appointed Medical Officer of Health for the Crickhowell Combined Districts.

JAMES, W. T., M.B., Ch.B. Edin., has been appointed Assistant Medical Officer to the Infirmary for Children, Myrtle-street, Liverpool.

LLOYD, J. A., L.R.C.P. Lond., M.R.C.S., has been appointed Second Assistant Medical Officer to the Infirmary, Lewisham Union, vice A. Carter, resigned.

LORIMER, J. A., L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer, Farnham Union, vice H. Sloman, resigned.

MACFARLAND, R. M. D., M.Ch. Irel., has been appointed District Medical Officer, Lincoln Union, vice T. W. A. Daman, resigned.

NELSON, W. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Wootton Wawen District, Stratford-on-Avon Union, vice J. Arthur, resigned.

O'REILLY, V., M.B., Ch.B. Irel., has been appointed District Medical Officer, Ormskirk Union, vice G. Morris, deceased.

PERDRAU, J. A., L.S.A., has been appointed Second Assistant Medical Officer, the Infirmary, Whitechapel Union, vice H. G. Bilery, resigned.

PINDO, R. G. D., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer of Churchill District, Axbridge Union, vice Dr. Box, resigned.

PRIESTLEY, THOMAS, L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer, Sheffield Union, vice J. Somerville, resigned.

REYS, OWEN L., M.B., Ch.B. Edin., has been appointed Resident Medical Officer to the Infirmary, Cardiff.

SASS, WILFRID, M.R.C.S., L.R.C.P. Lond., has been appointed Junior House Surgeon to the Great Northern Central Hospital, Holloway-road, London.

SHELDON, A. W. S., L.S.A. Lond., has been appointed Assistant Medical Officer at the Workhouse, parish of Nottingham, vice T. H. O'Shaughnessy, resigned.

SMITH, WM. ERSKINE, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the No. 4 District of the Christchurch Union, Hants.

SPARKS, C. E., M.B., B.C. Camb., has been appointed District Medical Officer, Chertsey Union, vice W. V. Robinson, resigned.

STIFF, HAROLD H., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the West London Hospital, Hammersmith-road, W.

TAUNTON, E., L.R.C.P. Lond., M.R.C.S., has been appointed Senior Assistant Medical Officer at the St. Pancras-road Workhouse, Parish of St. Pancras, London, vice T. Evans, resigned.

TELFORD-SMITH, T., M.D. Dubl., D.P.H. Camb., has been appointed District Medical Officer, Wimborne and Cranborne Union, vice C. H. W. Parkinson, resigned.

THOMAS, JOSIAH TELFER, L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Camborne (Cornwall) Urban District Council.

THOMPSON, WALTER, F.R.C.S., has been appointed Honorary Surgeon to the Leeds Public Dispensary.

TICKELL, THOMAS, B.Sc. Lond., has been appointed City Analyst for Exeter.

WATKINS, J. W., M.B., B.Ch. Dubl., has been appointed Medical Officer of Health, Bolsover Urban District, vice T. W. Cole, resigned.

WEBB, WILLIAM HENRY, M.D. Durh., L.R.C.P. Lond., M.R.C.S., L.S.A., has been re-appointed District Medical Officer by the Kingsbridge (Devon) Board of Guardians.

WOOD, A. A., M.B., Ch.B. Vict., has been appointed District Medical Officer, Nuneaton Union, vice A. N. Cookson, deceased.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—House Surgeon. Salary £80 per annum, with board and attendance.

BOROUGH HOSPITAL, Birkenhead.—Three Honorary Assistant Medical Officers.

BOROUGH OF LEICESTER.—Medical Officer of Health and Public Analyst. Salary £500 per annum.

BRISTOL GENERAL HOSPITAL.—Casualty Assistant House Surgeon. Salary £50 per annum, with board, residence, &c.

CENTRAL LONDON SICK ASYLUM DISTRICT.—Two First Assistant Medical Officers for Cleveland-street or Hendon. Salary £120 per annum, with board and residence.

CHELSEA INFIRMARY, Cale-street, S.W.—Temporary Second Assistant Medical Officer (male or female). Salary £2 a week, with furnished apartments, rations, washing, coals, and gas.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Pathologist. Salary 100 guineas per annum.

DUNDEE ROYAL INFIRMARY.—Resident Medical Assistant for six months. Salary at the rate of £40 per annum, with board and washing.

FRENCH HOSPITAL AND DISPENSARY, 172, Shaftesbury-avenue, W.C.—Resident Medical Officer, speaking French, unmarried. Salary £80 a year, with full board.

GOVAN DISTRICT ASYLUM, Crookston, near Paisley, N.B.—Senior Assistant Medical Officer. Salary to begin at £150 a year, with rooms, board, laundry, and attendance.

HAMPSTEAD HOSPITAL.—Resident Medical Officer for six months, eligible for re-election. Salary at the rate of £120 per annum, with rooms, coals, and gas.

HEIGHAM HALL ASYLUM, Norwich.—Assistant Medical Officer.

HYDROPATHIC ESTABLISHMENT, Limpley Stoke.—Resident Physician, unmarried preferred.

INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House Surgeon. Salary £75 per annum, with residence, board, and washing.

JESSOP HOSPITAL FOR WOMEN, Sheffield.—House Surgeon, unmarried. Salary £75 per annum, with board, lodging, and washing.

LIVERPOOL HOSPITAL FOR CONSUMPTION.—Resident Medical Officer for new Sanatorium. Salary £300 per annum, with board and apartments.

LIVERPOOL STANLEY HOSPITAL.—Senior House Surgeon. Salary £100. Also Junior House Surgeon. Salary £80, with residence, board, &c.

LONDON HOSPITAL, Whitechapel-road, E.—Obstetric Registrar.

MANCHESTER ROYAL INFIRMARY.—Resident Surgical Officer, unmarried. Salary £150 per annum, with board and residence.

MANCHESTER SOUTHERN AND MATERNITY HOSPITAL.—Resident House Surgeon. Honorarium £50 per annum and board.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Ophthalmic Surgeon.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Junior Resident Medical Officer. Salary £60 per annum, with board, attendance, and washing. For six months, eligible for re-election as senior.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Bloomsbury.—Senior and Junior House Physician. Salary respectively £100 and £50 per annum, with board and apartments.

NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST, Bournemouth.—Resident Medical Officer, from April 13th to June 30th. Honorarium for the term £30, with board, residence, and washing (no alcohol provided).

NEWCASTLE-ON-TYNE DISPENSARY.—Two Visiting Medical Assistants. Salary £160 for the first year, and £180 afterwards.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—House Physician, also House Surgeon, for six months. Salary at the rate of 50 guineas a year, with board and residence.

ROTHERHAM HOSPITAL.—Assistant House Surgeon. Salary £80 per annum, with board, lodging, and washing.

ROYAL FREE HOSPITAL, Gray's Inn road, W.C.—House Physician, also Casualty House Surgeon for six months. No salary, but board provided. Also Clinical Pathologist, salary £75 per annum; Assistant Pathologist, salary £25 per annum; and Resident House Physician and Resident House Surgeon. No salary is given to the resident officers, but board, &c., provided. Females only.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—House Physician for six months. Salary at rate of £60 per annum, with furnished apartments, board, and washing.

ROYAL SEA BATHING HOSPITAL, Margate.—Assistant Resident Surgeon. Salary £60 per annum, with board and residence.

SEAMEN'S HOSPITAL SOCIETY ("DREADNOUGHT"), Greenwich, S.E.—House Surgeon. Salary £50 per annum, with board, residence, and washing.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon for six months. Salary at rate of £24 per annum, with board, washing, and residence.

SWANSEA GENERAL AND EYE HOSPITAL.—Resident Medical Officer. Salary £75 per annum, with board, apartments, washing, and attendance.

UNIVERSITY OF GLASGOW.—Two Examiners in Medicine.

VICTORIA HOSPITAL, Folkestone.—House Surgeon. Salary £100 per annum, with board, residence, and laundry.

VICTORIA WOMEN'S SETTLEMENT DISPENSARY, Liverpool.—Resident Lady Medical Officer.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY.—House Surgeon. Salary £120 per year and £30 per year for dispensing, with furnished apartments and attendance.

WORKHOUSE INFIRMARY, Birmingham.—Assistant Resident Medical Officer. Salary £100 per annum, with furnished apartments, rations (which do not include alcoholic liquors), coals, gas, laundry, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

HINDS.—On March 26th, at The Steyne, Worthing, the wife of Frank Hinds, M.D., of a daughter.

MCKENZIE.—On March 25th, at Glenlyon, Durban, South Africa, the wife of Archibald McKenzie, M.D. Edin., of twin daughters.

MCLAREN.—On March 24th, at Walker-street, Edinburgh, the wife of John Shaw McLaren, F.R.C.S.E., of a son.

WOLFE.—On March 18th, at The Limes, Hoe-street, Walthamstow, N.E., the wife of R. Inglewood Wolfe, Surgeon, of a daughter.

MARRIAGES.

ABBOTT—L'ESTRANGE.—On the 26th of March, at St. Gabriel's Church, Warwick-square, S.W., by the Rev. C. E. L. Beresford Knox, assisted by the Rev. Canon Morris, vicar of the parish, Francis Charles Abbott, M.S. Lond., F.R.C.S., son of the late Rev. Arthur Robert Abbott, to Pauline, third daughter of the late Lieut.-Colonel Harry Peisley L'Estrange, of Moystown, King's County.

CRAMPTON—EDE.—On March 28th, at St. Chrysostom's Church, Manchester, Cecil B. Crampton, M.B., C.M., H.M. Geological Survey, to Freda Carline, third daughter of Frederick C. Ede, of Clarendon-road, C.-on-M., Manchester.

ROWLAND—PLUMER.—On the 28th March, at Shoreham, Sussex, Frederick William Rowland, M.B., B.S. Durh., M.R.C.S., L.R.C.P. Lond., of 6, Waterloo-place, Brighton, to Alice, daughter of Alfred S. Plumer, Esq., of Springwells, Steyning, Sussex.

DEATHS.

DANE.—On March 27th, at Clarendon Lodge, Millbrook, Southampton, Richard Martin Dane, M.D., C.B., Inspector-General of Hospitals, Army Medical Department, retired, aged 87 years.

GROWSE.—On March 30th, at Bildeston, John Lawrence Growse, M.R.C.S., L.S.A., in his 69th year.

MORRIS.—On March 27th, at Hayes, Kent, Thomas Morris, M.D., late of the Stock Exchange, in his 83rd year.

SKENE.—On the 24th March, at Buckley, Cheshire, William Skene, M.D., F.F.P.S. Glasg., L.R.C.S.E., in his 56th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

SIXTEENTH-CENTURY MEDICINE.

As the late John Addington Symonds justly remarks in the introduction to his admirable translation of Benvenuto Cellini's wonderful autobiography, not only was "the vehement ambitious Renaissance artist" a most veracious man, but he was also endowed with more than usual powers of observation. It will therefore be interesting, and may possibly prove instructive as well, to collate the medical matter contained in this unique record of a strenuous and exceptionally stormy career. The first medical topic mentioned is the plague, from which disease Cellini believed that he suffered during his early days in Rome:—

> "I had enjoyed a very pleasant night," he says, "and rose upon the hour of breakfast feeling tired, for I had travelled many miles that night [the *travelling* is metaphorical] and was wanting to take food when a crushing headache seized me, several boils appeared on my left arm, together with a carbuncle which showed itself just beyond the palm of the left hand where it joins the wrist. ..... I felt stifled at the heart, and made up my mind for certain that I was a dead man."

Thanks, however, to Cardinal Iacoacci's physician, who applied what are described as "admirable remedies," a great improvement soon set in, and before long the patient was able to announce his complete recovery from "that dreadful sickness." Cellini's next medical trouble was an attack of inflammation of the eyes, so painful that he "scarce could go on living for the torment." The etiology of this affection, as related by the sufferer himself, is somewhat remarkable.

> "I am convinced," he said to Pope Clement VII., "that the only cause of this great affliction which has happened to me is Cardinal Salviati. Immediately after your Holiness's departure he sent for me and when I presented myself he called my work a stew of onions, adding that he would send me to complete it in a galley; and such was the effect upon me of his knavish words that in my passion I felt my face in flame and so intolerable a heat attacked my eyes that I could not find my own way home. Two days afterwards cataracts fell on both my eyes, I quite lost my sight, and have been unable to work at all."

A certain "great gentleman" who was present during Cellini's audience told the Pope that he could free the artist from his infirmity by the following prescription: "Take flower-de-luces, stalk, blossom, and root together, then decoct them over a slack fire, and with the liquid bathe your eyes several times a day; you will most assuredly be cured of that weakness, but see that you purge first and then go forward with the lotion."

Cellini does not tell us whether or not he made use of this aristocratic ordinance, but in his next chapter he discloses the real source of his ophthalmia:—

> "It was true indeed," he says, "that I had got the sickness; the French disease, for it was that, remained in me more than four months dormant before it showed itself, and then it broke out over my whole body at one instant. The doctors would not call it the French disease, albeit I told them why I thought it was that. I went on treating myself according to their methods but derived no benefit. At last, then, I resolved on taking 'the wood' [in a note the translator of the memoirs says: "That is guiacum *(sic)*, called by the Italians *legno santo*"] against the advice of the first physicians in Rome, and I took it with the most scrupulous discipline and rules of abstinence that could be thought of. The result was that at the end of 50 days I was cured and as sound as a fish in the water."

This wonderful cure, however, was unfortunately more apparent than real. When the winter came in Cellini betook himself to shooting in order to "mend his shattered health," exposing himself to wind and water and to staying out in marsh-lands after sundown, so that before long he felt a hundred times more ill than he had been before. Once more he placed himself under doctor's orders, attending very carefully to their directions, but instead of mending grew always worse. When he found that "the fever" was increasing he resolved on having again recourse to "the wood" in spite of the opposition of the medical men, who warned him that if he took it while the fever was still on him he would not have a week to live. In this uncompromising pronouncement the physicians were unanimous, but Cellini made up his mind to disobey them. Adopting the same strict regimen as at first, he re-commenced drinking the decoction and in four days' time was wholly rid of fever. After 50 more days his health seemed to be perfectly re-established, and when at length he ventured to relax his rigid system of diet he found himself as completely clear of all bodily infirmities as if he had been born anew. "I may add," says the artist in conclusion of this episode, "that during my time of severe abstinence I produced finer things and of more exquisite invention than at any other period of my life."

The most serious illness from which Cellini seems ever to have suffered befel him soon after his rehabilitation at the hands of the Pope for his murder of Pompeo, on which occasion, as he tells us, he "walked in procession very honourably between two gentlemen and so got clear at last."

Four days after this ceremony Cellini was suddenly attacked with violent fever accompanied by a sensation of extreme cold, whereupon he forthwith betook himself to bed, having made up his mind that this time at all events he was sure to die. But notwithstanding this presentiment he had the first physicians in Rome called in to attend him, among the number being Francesco Fusconi, a man of great age as well as learning, who had been medical attendant to Popes Adrian VI., Clement VII., and Paul III. Convinced that his malady was due to an excess of blood in his veins, Cellini had begged one Bernardino, a barber-surgeon, to bleed him, but, curiously enough, the sanguifier refused to do so; and by the time that Maestro Francesco took charge of the case the opportunity for venesection, according to the latter, had gone by. Cellini grew rapidly worse:—

> "Nature in me," he says, "was utterly debilitated and undone. I had not strength enough to fetch my breath back if it left me, and yet my brain remained as clear and strong as it had been before my illness. Nevertheless, although I kept my consciousness, a terrible old man used to come to my bedside and make as though he would drag me by force into a huge boat he had with him."

Several of the sick man's friends having come in to talk with him and comfort him, one of the number, Messer Ludovico, asked him what it was he seemed to see and how the man was shaped. "While I was portraying him in words," says Cellini, "the old man grasped me by the arm and dragged me violently towards him. This made me cry out for help, because he was going to fling me down under hatches in his hideous boat. On saying that last word I fell into a terrible swoon and seemed to be sinking into the boat." During this "fainting fit" the patient was very violent, throwing himself about and casting bad words at some of the bystanders whose presence displeased him; but later he lay still like one dead, and after waiting beside him more than an hour the attendants, supposing him to be growing cold, left him for dead. Felice, his faithful friend and partner, alone remained, but when three hours more had passed without any change, and the five separate remedies that had been prescribed by Maestro Francesco were all expended, he ran off post-haste to the latter's door and set to knocking with such vigour that he made him rise from his bed. Then, with tears in his eyes, the energetic applicant implored the physician to come to his patient, for in sad truth he believed he was dead. Upon this Maestro Francesco, who was a very choleric man, replied: "My son! Of what use do you think I should be if I came? Do you imagine that if I were to come with my medicine I could blow breath up through his guts [Cellini makes the irate physician employ a still more forcible word] and bring him back to life for you?" When, however, the worthy, though sleepy, old physician saw that the poor young fellow was going off weeping he called him back and gave him an oil wherewith to anoint Cellini's failing pulses and heart, directing him also to pinch the little fingers and toes of the moribund very tightly and to send at once and call him if he should revive. Felice duly carried out his orders but without effect. When day broke all hope was abandoned. Directions were given to prepare the dead man's shroud and to set about washing his corpse. Upon this Cellini incontinently regained consciousness and began shouting to Felice to drive away the old man who would keep on tormenting him. Felice promptly approached the bed, making believe to obey and extending protecting arms. Cellini seized hold of one and forthwith it seemed to him that the objectionable phantom withdrew overcome by fear. He accordingly begged his friend not to leave him for a moment, seeing that the dreadful old creature was manifestly afraid of him. When Maestro Francesco came he declared he had never in all his days seen greater vital force in a man old or young than Cellini exhibited. Then he sat down to write and prescribed perfumes, lotions, unctions, plasters, and a heap of other things of price and rarity, but what really brought the sick man to life is described as "more than 20 leeches applied to his buttocks." Many people are said to have crowded in to behold the miracle of a resuscitated dead man, but, according to the ex-ghost himself, what they saw was "a body bored through, bound, and ground to powder."

And yet, in spite of all these wonderful doings and sayings, Cellini's "wretched malady went dragging on and he got but little better. Attendants and visitors vied with each other in their attentions and suggestions on behalf of the sick man, while his chief physician, that most excellent man Maestro Francesco, came four or five times a day. He and the other physicians were at the end of their wit and learning."

Cellini was "tormented by thirst," but abstained from drinking in compliance with the strict injunctions of his medical men. One day Felice went out leaving the patient under the care of a servant-maid called Beatrice. This girl, as it happened, "had stolen certain little things of some importance, and in her fear of being detected would have been very glad if her master had died." A great crystal vase was standing hard by full of clear and fresh water:

> "If you will bring it here and let me drink to my heart's content," said Cellini, who was overcome by drouth, "I will give you a new gown. At once the girl ran to fetch the vessel, and carrying it to the bedside she put the brimming margin to my lips. Twice did she allow me to drink my fill, so that in good earnest I swallowed

more than a flask full (upwards of a quart). Then I covered myself up and immediately began to sweat. In a few moments I fell into a deep sleep."

When Felice returned and learnt what had happened he began to beat the maid so severely that she set to screaming. The noise she made woke Cellini who cried out: "Leave her alone; perhaps when she meant to do me harm she did me more good than you were able to do with all your efforts. She may indeed have saved my life, so lend me a helping hand, for I have sweated, and be quick about it."

This seems to have been the turning point in a somewhat mysterious disease. When Maestro Francesco next came:—

"That most able man (who was not above owning himself mistaken) exclaimed: 'Oh, power of Nature! She knows what she requires and the physicians know nothing.' Whereupon that simpleton Bernardino made answer: 'If he had drunk another flask he would have been cured on the spot.' Turning to me, says Cellini, Maestro Francesco asked me if I could have drunk more water. 'No!' I replied, 'because I had entirely quenched my thirst.' Then turning to Maestro Bernardino the venerable physician cried: 'Look you now how Nature has taken precisely what she wanted, neither more nor less. In like manner she was asking for what she wanted when the poor young man begged you to bleed him. If you knew that his recovery depended upon his drinking two flasks of water why did you not say so before? You might then have boasted of his cure.' On hearing these words the miserable quack sulkily took himself off and never showed his face again."

Under orders from Maestro Francesco, Cellini was taken with great precautions in a chair, well wrapped up and protected from cold, to a house on Monte Cavallo belonging to Cardinal Cornaro.

"No sooner had I reached the place," he says, "than I began to vomit, during which there came from my stomach a hairy worm about a quarter of a cubit in length; the hairs were long and the worm was very ugly, speckled of divers colours, green, black, and red. They kept and showed it to the doctor who said he had never seen anything of the sort before."

This serious illness of Cellini lasted during "more than 50 days" in an acute form and a long time passed before he was completely restored to his customary good health. There is no hint to that effect in the memoirs, but it seems possible, if not probable, that the turbulent artist may have been poisoned out of revenge by the adherents of his victim Pompeo, the Milanese jeweller, whom he killed by "two stabs with a poniard in the throat in the midst of 10 men who were guarding him." Be this as it may, save for the present attack, whatever it may have been, Cellini always enjoyed the most robust health, even during his prolonged and cruel imprisonment in a water-logged dungeon, the only other illnesses mentioned in his autobiography being one *febbre effimera* (a fever of one day's duration) brought on by excitement while the casting of his famous statue of Perseus was in progress, and an "indisposition" caused by the unwholesome air at "a very handsome place called Belfiore, close under the city walls" at Ferrara. The way in which Cellini got the better of the last-mentioned sickness is remarkable from more points of view than one. Observing that the domain was haunted by multitudes of peafowl which bred and nested there in a state of freedom the idea came into his head to charge his gun with "a noiseless kind of powder"; then he tracked some of the young birds and every other day shot one which furnished him and his companions with an abundance of meat of such good quality that they speedily shook off their indisposition.

In the matter of accidental injury Cellini did not come off altogether scatheless. While effecting his escape in such a marvellous way from the Castle of Sant' Angelo, where Pope Paul III. had incarcerated him, his "right leg was broken three inches above the heel" (doubtless a case of Pott's fracture). The great hardships he underwent for a considerable time afterwards were little calculated to conduce to such a good ending, but thanks to "Maestro Jacomo of Perugia, a most excellent and able surgeon," who set the bone with much dexterity, the intrepid fugitive eventually recovered perfectly. Once as he was working on a statue of Narcissus Cellini tells how

"A very fine splinter of steel flew into my right eye and embedded itself so deeply in the pupil that it could not be extracted. I thought for certain that I must lose the sight of the eye, but Maestro Raffaello de' Pilli succeeded in effecting a cure, although he was not called in until several days after the accident. Having obtained a couple of live pigeons he placed me on my back across a table. Then he took the birds and opened a large vein they have beneath the wing, so that the blood gushed out into the injured eye. I felt immediately relieved and in the space of two days the splinter came away and I remained with my vision greatly improved."

Cellini's experience of poisons was, as might be expected, very considerable. While he was the Pope's prisoner an attempt was made, he says, to get rid of him by

"Mixing pounded diamond with my victuals. Now the diamond," he adds, "is not a poison in any true sense of the word, but its incomparable hardness enables it, unlike ordinary stones, to retain very acute angles. When other stones are pounded that extreme sharpness of edge disappears, the fragments becoming blunt and rounded. The diamond alone preserves its trenchant qualities, wherefore if it chances to enter the stomach together with food the peristaltic motion needed for digestion (*Ja quel girare cho é fanno é cibó*) brings it into contact with the coats of the stomach and the bowels where it sticks, and by the action of fresh food forcing it farther inwards after some time the organs become perforated. Thus eventually death is caused."

According to Cellini, the preservation of his life on this occasion was due to the covetousness of the miscreant who had been hired by his enemy to carry out the nefarious plot. In lieu of the brilliant worth more than 100 crowns which was intrusted to him to pound this individual substituted "a greenish beryl of the value of two carlins, thinking, no doubt, that because it also was a precious stone it would work the same effect as a diamond." Another attempt to poison Cellini took place towards the close of his career, the motive in this case being the sordid one of robbery. The artist having bought a farm from one Piermaria d'Anterigoli, surnamed Lo Sbietta, on condition that at his death the property was to revert to its original owner, the latter, with the assistance of his wife, tried to bring about the purchaser's speedy demise by administering a quantity of "sublimate" in some highly-spiced sauce. The woman, by her assiduity in pressing him to partake of the condiment, fortunately excited the victim's suspicion, and it was also Cellini's "custom to take but little sauce or seasoning with his meat, excepting salt," and so he escaped.

"The quantity of poison I swallowed," he says, "was not enough to kill me, but exactly sufficed to cleanse me of a mortal viscosity from which I suffered in my stomach and intestines. ..... The poison worked so well that whereas before I took it I had perhaps but three or four years to live, I verily believe now that it has helped me to more than 20 years by bettering my constitution. For this mercy I return thanks to God with greater heartiness than ever; and this proves that a proverb I have sometimes heard spoken is true, which runs as follows: 'God sends us evil that may work us good.'"

"MEMORIAL TO THE LATE DR. ARCHIBALD HAMILTON JACOB."

AMOUNT already announced in THE LANCET—£339 3s. 9d.

	£	s.	d.		£	s.	d.
Dr. A. Johnston	2	2	0	Mr. C. R. C. Tichborne ...	2	2	0
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Honorary treasurers: Sir Charles A. Cameron, C.B., 51, Pembroke-road, Dublin; and Mr. L. H. Ormsby, Vice-President of the Royal College of Surgeons in Ireland, 92, Merrion-square, Dublin. Honorary Secretary: Mr. George F. Blake, Royal College of Surgeons, Dublin. As the list must shortly close intending subscribers should send in their subscriptions as soon as possible.

"PLACE OF RESIDENCE FOR A RETIRED SURGEON."

To the Editors of THE LANCET.

SIRS,—Will you permit me, in reply to "P. P.," whose communication appeared in THE LANCET of March 30th, p. 967, to say that having now practically retired I find Bournemouth exceedingly pleasant, physically and socially. Branksome is nearly equally desirable, and rents and taxes are very much cheaper. It is quite as healthy, there is more country as well as the advantage of the park, and it is within walking distance of Poole Harbour and shipping. You can get into Bournemouth from Branksome by rail or tram in about 10 minutes for a few pence.

I am, Sirs, yours faithfully,

Bournemouth, March 30th, 1901. F. H. A.

WANTED—A HOME.

To the Editors of THE LANCET.

SIRS,—Can any of your readers recommend a home for a girl, aged 16 years, of weak intellect? The friends can pay a small fee.

I am, Sirs, yours faithfully,

Ash Cottage, Hindley, March 30th, 1901. J. CHRONNELL.

THE PRINCE CHRISTIAN VICTOR MEMORIAL FUND.

The following sums, additional to those which have already been announced in the daily press, have been received for the Prince Christian Victor Memorial Fund for endowed beds for disabled soldiers and sailors in the Princess Christian Homes (Memorial Office, Horse Guards, S.W.):—Mrs. S. Lewis, endowed bed, £600; Mrs. Bischoffsheim, £50; Miss Dawson Lambton, £25; Miss E. Dawson Lambton, £25; Mr. A. Moseley, £21; Lord and Lady Llangattock, £20; £10 10s. each Mr. John Fairbank, Mr. H. Oppenheim, and Miss Tidswell; £10, Anon, Major-General Blundell, General Sir R. Buller, Major Hon. F. L. Colborne, Earl of Cranbrook, Earl of Elgin, Lady Susan Leslie Melville, Mr. Pandeli Ralli, Lord Justice Romer, Right Hon. A. H. Smith Barry, and Mrs. Smith Barry; £5 5s., Mrs. Erle, Viscount Knutsford, Mrs. C. Lancaster, Captain C. B. Levita, Colonel R. Parry Nisbet, and Sir R. Douglas Powell; £5, Mrs. Adeane, Lord Aldenham, Colonel Donald Browne, Lady

Victoria Buxton, Duchess of Cleveland, Sir James Colquhoun, Hon. Mrs. Dillon, Dowager Lady Hillingdon, Lord Knutsford, Captain M. A. Laing, Rev. K. H. B. Maitres, Duke of Montrose, Miss Penny, Earl of St. Germans, Mr. George Scott, Lord Thring, Major-General Swaine, and Mrs. Robert Wingate; £4 4s., Sir Hugh and Lady Wyndham; £3 3s., Dr. T. Miller Maguire and Mr. F. D. Mocatta; £3, Constance Marchioness of Lothian and Mrs. William Rickman; £2 2s., Mrs. E. Blathwayt, Hon. T. A. Brassey, General Dunne, Messrs. Helmers and Sons, Mr. R. Y. Kennedy, Messrs. Lloyd, Mr. C. P. Penny, Mr. R. K. Purnell, and the Bishop of Rochester; £2, General E. M. Cherry, Mrs. C. L. Foquette, Countess of Lytton, Countess of St. Germans, Private A. Williams (collected), Mr. V. C. Smith, and Colonel Turbervill; £1 1s., Mrs. Y. H. Beevor, Captain Clarke, Mrs. Emerson, Hon. Mrs. Kennedy, Mrs. C. R. Jackson, Mrs. Mackenzie, Mr. C. S. Matthews, Hon. Mrs. Talbot, Mrs. Charles Thynne, and Mr. F. R. S. Wyllie; £1, Lady Colville, Lady Fletcher, Miss Maxwell, and Miss S. E. H. Noyes; 16s., Miss Rooper; 10s. 6d., Miss A. M. Courtenay, Miss L. Courtenay, R. E. D., Miss F. H. Fisher, Dr. Kelly, and Mr. B. S. Ogle; 10s., Dr. Alderson, A Reader of the *Scottish Guardian*, A Scotch Woman, E. Y. E., and Mrs. Hawkins; 5s., Miss Butler, Miss M. Chute, and Miss M. Edwards.

Jay Pay.—We have not seen the book in question. There is, of course, difficulty in securing conviction against a man for publishing obscenity if he can set up anything in the nature of a defence. As a rule it is hard to find a prosecutor, the police rarely taking the initiative, and private individuals are not willing to do the unpleasant work.

Virtus.—Our correspondent is referred to an annotation on the subject which appeared in our last issue on page 952 and in which we state our views of the matter.

Blushing.—We cannot recommend any treatment.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (9th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

WEDNESDAY (10th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.).

THURSDAY (11th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

FRIDAY (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

SATURDAY (13th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY (10th).—HUNTERIAN SOCIETY (London Institution, Finsbury-circus, E.C.).—8.30 P.M. Clinical Evening.

FRIDAY (12th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Papers:—Dr. J. H. Bryant: A Case of Volvulus of the Ileum with Severe Intestinal Hæmorrhage.—Mr. F. J. Steward: A Case of Ureteral Calculus simulating Vesical Calculus.—Dr. W. H. B. Brook: An Attempt at the Antenatal Treatment of Hæmophilia.—Dr. StClair Thomson: Poisoning from the External Use of Aniline Oil.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, Hammersmith-road, W.).—8.30 P.M. Papers:—Mr. W. H. Jessop: 100 Consecutive Cases of Simple Extraction of Cataract.—Dr. A. Whitfield: A Case of Peculiar Intolerance of the External Application of Mercury.

WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8.45 P.M. Dr. S. Taylor will introduce a Discussion on Typhoid Fever.

LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Cases will be shown by Dr. D. Grant, Dr. StClair Thomson, Dr. Horne, Mr. Walsham, Mr. Wingrave, Dr. Powell, Mr. Lake, Mr. Parker, Dr. S. Spicer, and Mr. L. Turner.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY (9th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. H. Campbell: Consultation. (Medical.)

WEDNESDAY (10th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Berry: Consultation. (Surgical.)

THURSDAY (11th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Consultation. (Surgical.)

FRIDAY (12th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. D. Grant: Consultation. (Ear.)

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 3rd, 1901.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Mar. 28	29·69	N.	...	71	38	28	Fzn.	33	Snowing
" 29	29·81	N.W.	0·06	78	45	27	Fzn.	32	Hazy
" 30	29·22	S.W.	0·33	70	49	32	41	42	Raining
" 31	29·20	S.W.	0·20	78	50	38	44	47	Raining
April 1	29·52	S.W.	...	98	54	43	40	43	Cloudy
" 2	30·02	S.	...	90	55	38	42	44	Fine
" 3	29·56	S.W.	0·01	65	55	44	51	53	Cloudy

During the week marked copies of the following newspapers have been received:—*Bury Times, Oldham News, Halifax Courier, Bournemouth Guardian, Hampshire Telegraph, Manchester Courier, Glasgow Times, Walsall Chronicle, Leeds Mercury, Blackburn Telegraph, Yorkshire Herald, Southern Echo, Hereford Times, Shields Daily Gazette, Grimsby Gazette, Leicester Advertiser, South Wales News, Western Press (Bristol), Times of India, Pioneer Mail, Scotsman, Citizen, Builder, Architect, Yorkshire Post, Liverpool Daily Post, Bristol Mercury, Stroud News, Cambridge Chronicle, Newport Herald, Radnorshire Standard, Market Harborough Advertiser, Siam Free Press, Midland Daily Telegraph, Health, Town and Country Journal (Sydney), St. Andrew (Glasgow), City Press, Local Government Chronicle, Hertfordshire Mercury, Nottingham Daily Guardian, Reading Mercury, Australasian Gazette, Queensland Government Gazette, Surrey Advertiser, Local Government Journal, South African News, Cambridgeshire Times, Ulster Echo, Warder, Soham Advertiser, Westminster Budget, Warwick Times, Boston Guardian, Huddersfield Examiner, Lloyd's Newspaper, Herald of Wales, Cornish Post, &c., &c.*

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